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DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1984

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE
COMMITTEE ON APPROPRIATIONS
UNITED STATES SENATE
NINETY-EIGHTH CONGRESS
FIRST SESSION

Printed for the use of the Committee on Appropriations

PART 1—Budget Overview (Page 1-492)

Department of Defense
Department of the Army
Department of the Navy
Department of the Air Force

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Subcommittee on Department of Defense

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CONTENTS

WEDNESDAY, FEBRUARY 23, 1983

Page
Department of Defense: Secretary of Defense 1

THURSDAY, FEBRUARY 24, 1983

Department of Defense: Department of the Army 85

TUESDAY, MARCH 1, 1983

Department of Defense: Department of the Air Force 251

TUESDAY, MARCH 8, 1983

Department of Defense:

- Department of the Navy 335
  - Chief of Naval Operations 344
  - U.S. Marine Corps 352

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1984

WEDNESDAY, FEBRUARY 23, 1983

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m., in room SD-138, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, Kasten, Rudman, Stennis, Proxmire, and Huddleston.

DEPARTMENT OF DEFENSE

SECRETARY OF DEFENSE

STATEMENT OF HON. CASPER W. WEINBERGER, SECRETARY OF DEFENSE

ACCOMPANIED BY GEN. JOHN W. VESSEY, JR., CHAIRMAN, JOINT CHIEFS OF STAFF

OPENING STATEMENT OF SENATOR STEVENS

Senator **STEVENS**. Good morning, Mr. Secretary and General Vessey.

We have scheduled a hearing this morning on the budget overview for the Defense Department. I understand, Mr. Secretary and General, this is your seventh appearance before Congress to defend your budget.

I think it is high time we try to find some way to consolidate some of these hearings so that we might have more time to analyze the budget and less time to talk about it.

BUDGET REQUEST

The Defense Department is seeking $265.2 billion for new budget authority, an increase $33.3 billion over the appropriations to date for the fiscal year 1983. On the outlay side, which is the one we are most concerned with, the 1984 request is $231.7 billion, up $28.8 billion over the 1983 estimated level.

There is also coming to us, we understand, a supplemental appropriation request for 1983 for $1.6 billion. I understand that may be accompanied by some form of recission proposal.

The 1984 defense budget represents an increase of 14 percent or a real growth rate of somewhere near 10 percent. The emphasis of the budget appears to be on modernization with the largest dollar increase coming in procurement and the largest percentage increase appearing in research and development.

We want to print your statements in the record in full, Mr. Secretary and General. I do recognize that there have been criticisms of the case you are presenting on behalf of the Department of Defense. I for one think you are justified in defending your budget. It will be under severe attack at all levels.

I congratulate you gentleman for repeatedly defending the budget that is before us. Now it does not means that this committee is not going to respond to the budget process. We will, as you know, be compelled to live with the budget process and to report out a bill that complies with the budget regulation when it is made up.

It is my understanding that Senator Rudman has an opening statement.

Do you have an opening statement, Mr. Proxmire.

Senator PROXMIRE. No, Mr. Chairman.

Senator STEVENS. Senator Rudman.

STATEMENT OF SENATOR RUDMAN

Senator RUDMAN. Mr. Chairman I have a statement about 5 minutes in length.

Before I make that statement I want to say to you Mr. Secretary, that I have observed with deep regret what I consider ad hominen attacks made upon you in other hearings. I hope you will understand the nature of this statement which I think is strong and direct, certainly it is not directed at you personally, but directed to what I believe is a problem and this is a good place.

As you and the other members of the committee know, I rarely make an opening statement, this is the first one in 2 years, preferring instead to listen to the testimony presented before asking specific questions concerning the matter at hand.

However, as we begin hearings on the defense appropriations bill for fiscal 1984, I wish to speak directly to Secretary Weinberger and to those in his office and in the uniformed services who are responsible for the budget requests we will consider.

My statement is simple and declarative in nature because if I have learned anything in the 2 years that I have been here, it is that those within Government hear only what they wish to hear and not what the people, through their elected representatives, are saying.

On May 20, 1981, I gave my maiden speech on the floor of the U.S. Senate. The occasion was the consideration of the fiscal 1981 supplemental defense appropriations bill. I chose that moment because the issue of national defense was, and still is, important to me. In that speech, I said:

First, no task was more important than that of restoring our military posture, and

Second, it was rare in an era of fiscal retrenchment to find a public consensus supporting increased defense spending.

However, I also cautioned that to assume that the consensus could be sustained without changes in our military procurement practices was to indulge in fantasy.

Mr. Secretary, to be direct, our military procurement practices remain unchanged despite rhetoric to the contrary and the consensus so important to our efforts was waned to the point of nonexistence.

Nothing could distress me more than having to make those two observations. As a former combat infantry commander in Korea, I yield to no one in my belief that this country deserves a proud, strong, and well-equipped military. I have tried to work toward that goal during the past 2 years, only to see business as usual at the Pentagon.

VIPER ANTITANK WEAPON

I do not speak in generalities, I can cite specifics. One example, a microcosm of the procurement problems we face, is the Army's light, antitank weapon, Viper Two years ago, interested to learn if much needed improvements in our antitank weapons were being made, I sought information on Viper.

Unfortunately, all I found was the extraordinary cost overruns, operational deficiencies, and time delays that have been associated with Viper, a weapon which even in its present form comes nowhere near meeting the origional requirement that spurred its development.

At first, perhaps naive in my belief that we were all working for the same goal, I attempted to work with Army personnel to simply insure that alternative systems be considered. I am sorry to say that my efforts were met with both obfuscation and delay as the Army conveniently ignored report language in the fiscal 1982 defense appropriations bill mandating competitive evaluation of alternative systems.

The obfuscation came from the highest levels of the Army. The lesson was clear: Our military systems managers are so tied to interests unrelated to the basic question of whether a particular weapon system is in the best interests of national defense that their judgments are suspect.

Last year, disillusioned by my first year's experience, I led the effort to delete funding altogether for the Viper program in fiscal 1983. The outcome was direct: "No further funds shall be spent to develop or procure Viper."

This was not a parochial decision for me. To the contrary, New Hampshire will lose jobs if Viper is abandoned. It was simply the right decision.

The Pentagon's response to that language has been incredible. First, $327.5 million was originally proposed for further Viper funding in this year's budget. Though presently not included in your request, funds for further Viper procurement have been projected for fiscal 1985.

Second, at least one manufacturer of an alternative system has been told that its product cannot be tested with certain components which might insure a performance superior to Viper's.

Third, arbitrary weight and length criteria have been established which conveniently jeopardize the selection prospects of certain candidates with better performance than Viper.

Fourth, Viper is now being considered for export in order that its production may proceed apace.

Finally, Mr. Secretary, and perhaps most distressing, the competitive evaluation process is curiously being developed on the basis of a 1975 required operational capabilities document which the Army has not modified despite the evolution of the Soviet armored threat.

All this for a weapon whose first Army-purchased production round exploded in its launch tube. Not a test round, a production round. It is only by the grace of God that no one was killed by this weapon which would pose little threat to an advancing, modern Soviet tank.

This is not to say that all who work within the military establishment should be so excoriated. Recommendations that Viper production cease have come from the Defense Resources Board, the General Accounting Office, the Office of Management and Budget, the President's own Private Sector Survey on Cost Control in the Federal Government, and several Defense Department review panels.

Many of these are groups upon whose advice you presumably rely. In this case, as in others, their advice was completely ignored. For what do we pay these people if their advice is not to be heeded? Are your deputies so clairvoyant that they need only the general staff to pass upon the merits of every weapon system considered for acquisition? If so, perhaps major payroll savings are available to us in our effort to cut the Nation's huge deficit.

Mr. Secretary, Viper is not an isolated example: I wish it were. The fact is, the arrogance exhibited by those connected with Viper appears to be the norm. It is an arrogance exemplified by the former Director of Army Combat Support Systems who boasted openly of having convinced me of the Army's position when I had given no such indication.

Do they take us for fools? Do they sit in their offices and decide which of them will be called upon to have his hand slapped at a congressional hearing while the military does as it pleases? I fear it is so.

You come to us claiming that your defense budget cannot be cut. Perhaps you are right. Only time will tell. However, I do know this: If we had proper program planning and management within DOD, we would not be faced with rhetoric concerning ideology and political opportunism. Instead, we would find renewed confidence that the dollars you ask for are truly necessary.

Mr. Secretary, it is not so much with anger as with anguish that I speak to you this morning. What we need most we may lose, not by virtue of those who oppose a strong military ideology, but by virtue of the military's inability and disinclination to correct well-documented defects in the procurement system. Money alone can never substitute for good management. I hope we can all keep that in mind as we begin consideration of the defense budget.

Mr. Chairman, I apologize for the length of that statement. I thank you for that time.

Senator **Stevens**. I don't know anyone who has paid more attention to the subcommittee since he joined it as a freshman. This is the first time he has ever made an opening statement. I believe it is his prerogative to do it.

COMPARATIVE BUDGET TABLE

Mr. Secretary, for the record we will insert a comparative table of the budget authority and outlays by appropriations account summarizing the Department's funding request within the jurisdiction of this subcommittee.

[The table follows:]

DEPARTMENT OF DEFENSE
BUDGET AUTHORITY (BA) AND OUTLAYS

APPROPRIATION TITLE (THOUSANDS OF DOLLARS)	BUDGET AUTHORITY (BA) FY 1984	OUTLAYS FY 1984
MILITARY PERSONNEL		
Military Personnel, Army	15,214,700	15,168,100
Military Personnel, Navy	11,293,600	11,247,100
Military Personnel, Marine Corps	3,462,900	3,447,300
Military Personnel, Air Force	12,757,900	12,687,800
Reserve Personnel, Army	1,386,500	1,374,700
Reserve Personnel, Navy	743,200	728,500
Reserve Personnel, Marine Corps	177,300	172,700
Reserve Personnel, Air Force	383,300	379,700
National Guard Personnel, Army	1,914,800	1,881,400
National Guard Personnel, Air Force	593,000	588,200
TOTAL - MILITARY PERSONNEL	47,927,200	47,575,500
Retired Pay, Defense	16,805,800	16,770,400
OPERATION AND MAINTENANCE		
Oper. and Maint., Army	17,867,800	17,242,900
Oper. and Maint., Navy	23,225,600	22,398,700
Oper. and Maint., Marine Corps	1,575,900	1,514,800
Oper. and Maint., Air Force	18,999,100	18,453,800
Oper. and Maint., Defense Agencies	6,871,900	6,678,200
Oper. and Maint., Army Reserve	662,800	656,800
Oper. and Maint., Navy Reserve	693,000	654,000
Oper. and Maint., Marine Corps Reserve	53,629	50,400
Oper. and Maint., Air Force Reserve	815,000	802,500
Oper. and Maint., Army Nat'l Guard	1,135,000	1,133,600
Oper. and Maint., Air Nat'l Guard	1,824,700	1,804,800
Rifle Practice, Army	899	900
Claims, Defense	222,900	214,100
Court of Military Appeals, Defense	3,372	3,300
Foreign Currency Fluctuations, Defense	-	-
XIII Olympic Winter Games	-	-
Summer Olympics	50,000	40,000
TOTAL - OPERATION AND MAINTENANCE	74,001,600	71,648,800
PROCUREMENT		
Aircraft Procurement, Army	3,472,100	2,368,500
Missile Procurement, Army	3,088,500	2,363,700
Procurement of W&TCV,Army	4,934,416	4,109,600
Procurement of Ammunition, Army	2,334,189	2,117,100
Other Procurement, Army	5,362,870	3,706,900
National Guard Equipment, Army	-	22,500
Aircraft Procurement, Navy	11,127,300	9,317,800
Weapons Procurement, Navy	4,028,600	3,233,200
Shipbuilding and Conversion, Navy	12,698,800	8,506,100
Other Procurement, Navy	5,001,838	3,616,700
Procurement, Marine Corps	1,852,049	1,237,500
Aircraft Procurement, Air Force	22,707,190	15,379,400
Missile Procurement, Air Force	8,570,834	5,063,600
Other Procurement, Air Force	7,626,302	6,418,900
Procurement, Defense Agencies	1,082,791	727,000
National Guard and Reserve Equipment, Def	-	38,100
Defense Production Act Purchases	200,000	-
Proc. of Aircraft & Missiles, Navy	-	9,000
Proc. of Equip. & Missiles, Army	-	2,500
TOTAL - PROCUREMENT	94,087,779	68,238,100
RESEARCH, DEVELOP., TEST&EVAL.		
RDT&E, Army	4,792,200	4,364,400
RDT&E, Navy	8,181,043	7,138,900
RDT&E, Air Force	13,652,273	12,257,000
RDT&E, Defense Agencies	2,939,900	2,518,800
Dir. of Test & Eval., Defense	56,800	53,000
TOTAL - RESEARCH, DEVELOP., TEST&EVAL.	29,622,216	26,332,100

RESPONSE TO SENATOR RUDMAN

Senator **Stevens**. Mr. Secretary, as I have indicated, your statement and that of General Vessey will be printed in the record in full.

You may proceed in any manner you wish.

Secretary **Weinberger**. Thank you very much.

We will have a modified short opening statement in a moment. I would like to respond to Senator Rudman now, however.

I appreciate the spirit in which he was spoken. Obviously he feels very deeply about this particular weapon and obviously, therefore, we do, too.

I would like to say, however, concerning his opening remarks, Senator, that the military procurement process has changed. It is not only changing, but it has changed already. There are a number of improvements we put into it. I will be glad to go into them with you now in very brief detail and much greater length later.

CHANGES IN PROCUREMENT PROCESS

We have put in multiyear procurement with the consent of the Congress. We have been budgeting to much more realistic cost and realistic inflation estimates. We have put in a whole series of independent budget estimates that are required from the services now for major systems. We are placing a much greater degree of emphasis on competition. We are working on preplanned product improvement and attempting to modernize the industrial base.

We are also paying a great deal more attention to the contracts that originally procured these items and trying to put a much greater penalty on contractors for being late or for overrunning. At the same time we are placing a much greater emphasis on monitoring the execution of these contracts by having regular meetings every 2 weeks on the major systems. We try to see if anything is going wrong, if anything is causing overruns, or anything is happening in the performance when the system gets that far along or if anything is causing delay.

So far on the major systems that we have put this into effect, we have not found any systems that are running over or that are running into major delays. I think that close monitoring is an extremely important part of the procurement policy change.

CONSENSUS ON PROCUREMENT

With respect to the consensus, all I would say is that I think it is, as you pointed out in your maiden speech in the Senate, difficult to obtain or maintain a consensus. People in a free, liberal, and democratic society such as ours do not like military spending under any circumstances.

There are times when they recognize we are behind and we need to do a great deal. Such a time occurred at the end of 1980 and in 1981.

There is also a perception, I find, that we have already done a great deal and maybe now that is enough, and maybe we can go back to old times. This shows a lack of realization as to how long it takes to catch up properly when you have had as long a period of neglect as the United States suffered.

I think we are running into something of that at the moment. We certainly are conscious of the need to maintain a consensus. I don't disagree with you at all as to the importance of trying to do that.

VIPER ANTITANK WEAPON

With respect to Viper specifically, we have had, as you have indicated, a lot of internal discussion about it. The Army has been specifically ordered to conduct the tests required that you mentioned that were placed in the conference report. Be assured, that is being done.

There have been a lot of people who have examined the system and found deficiencies in it. There are a lot of people who have great faith in it and believe that the changes that are being made will ultimately result in a weapon that will be effective.

You and I both know the importance of having an effective and reliable antitank weapon. Certainly General Vessey can attest to that, too. You start out with hopes on these weapons. You find some things that go wrong with them.

Many of them started many years ago, and a lot of money is sunk into the development. Then you have a close question as to whether you abandon it, or whether you try to get some value out of that money that has been sunk in a system that may not turn out to be as good as you would like to have it. We are in the middle of that process with the Viper right now.

But as far as not paying attention, or as far as arrogance is concerned or attempting to obfuscate the process, as you described, that would certainly be contrary to everything I want done in the department. It is contrary to everything that I believe is the basic instructions of the Joint Chiefs and all of the service chiefs.

There is no doubt at all that in any organization as large as Defense you will occasionally run into people who haven't gotten the word. But we try to minimize that, and certainly in this specific case, I will conduct a personal investigation because I would not want to have any Senator, certainly not you, who has been very supportive of defense efforts, receive this sort of treatment.

We will have a report to you on what our recommendation is ultimately with respect to this weapon.

M-1 TANK

We do need an effective system. We have put a lot of money into it. A lot of that started a long time ago. As always with these things, we have a question as to whether it is better to stop and start over or to continue and improve. We had that with the M-1 tank, frankly.

The tank was 20 years in the development and that is much too long, as I have told almost everybody. We do have now a tank that we think is finally one that is equal to and in many respects superior to the Soviet tanks it has to face.

We had a tremendous amount of money sunk into that. We had a possible decision of saying that too many things seem to be wrong, and we are going to stop it right now. We also could try to fix them up and produce a tank much more quickly than we could if we abandoned that and started another cycle of development. I think that our decision has been justified.

There are very close decisions on a number of these weapons. Certainly I would be the last person in the country to sit here and ask you for authority to continue or to complete a weapon system that I was convinced would not work.

There have been problems with it, but we certainly have every intention of examining all of those problems, and seeing if they can indeed be corrected or if it should be abandoned with considerable loss of money long ago appropriated and spent.

Senator **STEVENS**. Pardon me, Mr. Secretary. Can you pull that microphone up a little?

Secretary **WEINBERGER**. That concludes what I wanted to say in response to the Senator's very thoughtful statement. I appreciate the spirit with which he has delivered it.

VIPER CONCEPT

General **VESSEY**. I will only second what the Secretary said particularly about the Viper.

Senator Rudman knows the importance of the hand-held antitank weapon to defeat an enemy's armored thrust, whether it is the front line infantry or the forces in the rear. It is a thing that can turn an enemy armor penetration into something that can be absorbed and dealt with or the lack of it will guarantee success for the enemy.

So, the concept behind the Viper was very, very important, to get a light hand-held antitank weapon that could be used against enemy tanks.

The whole object of the defense is to seek out those tanks with sophisticated antitank weapons, those things carried in fighter aircraft, helicopter tank guns and big antitank weapons. But sooner or later the battle is decided by men with hand-held antitank weapons fired at very short range.

Now getting something that the infantryman can carry and not throw away—that he will continue to carry into battle for the chance, that is probably not very high, that he is going to have to fire at one of those tanks—means you have to make that right balance between weight and capability. We have spent an awful lot of money on the Viper. It costs far too much.

I wasn't around when it was started, and the Army was probably misled by its own scientists and others about what could be done for a certain amount of money to poke a hole in a tank.

A main gun tank round costs well over $1,000, to say nothing of the gun and the tank that carries it. The very idea you could do the same thing with something you could buy for less than $100 is absurd, but we did not recognize that in the beginning. The Viper probably costs far too much, but it is very, very important that we strike the right balance between weight and capability and the Army is trying very hard to do that.

In my last days in the Army, both the Under Secretary of the Army and I were personally involved in trying to insure that the

Viper either produced the effectiveness that it was supposed to produce, and that the cost got down to what was reasonable for what we were trying to do, or we got a substitute.

The Army has some tough decisions to make. As far as I know, at least when I left it 8 months ago, they were going ahead with those tests that were ordered which were very important.

Senator **Rudman**. I thank both the Secretary and General Vessey for their responses.

I think that statement is illustrative of a deeper problem which we can talk about at a later time.

General Vessey, I agree with your statement. I would like to have the infantry soldier have the best antitank weapon at the lowest cost, preferably, not the bad weapon at the highest cost. That is the bottom line of my statement.

General **Vessey**. I agree with you.

Senator **Stevens**. Mr. Secretary, I would like to proceed with the statement, if we could.

I want to announce to the subcommittee we are going to follow the procedure that is now followed in the full committee and that is, with exception of the distinguished ranking minority member, our good friend from Mississippi, I will recongnize the Senators for questions in the order in which they have come to the subcommittee table.

We would like to have your statement and that of General Vessey so that we can get to the process on analyzing this budget, if we can.

Thank you for the spirit of your response to Senator Rudman. Again I point out to you and the committee there is no member of the committee, including myself, that has spent the time on the budget in the last 2 years that Senator Rudman has. He has made a substantial contribution to the subcommittee and full committee and the work on the floor.

So, I do believe his statement is in order, but I would like to get at the business at hand, if we could.

EARLY ANTITANK WEAPON

Secretary **Weinberger**. We will. I certainly regret any of the individual responses he may have received as indicated in his statement. We will make an immediate attempt to find out who is responsible for that, Senator, and do something about it.

I have to add a short personal note as to how important I think this kind of capability is because when I was in the Army far too many years ago, our individual antitank weapon was a small rocket you fastened on the end of an M-1. Aside from the fact that it knocked you over every time you used it, it was not that accurate. So I have precisely the same interest that I think you do in making sure we get something that is more effective than that.

CONGRESS SUPPORT IN MILITARY BUILDUP

Mr. Chairman and members of the committee, we appreicate having the full formal statement put in the record. I am going to try to summarize as briefly as I can some of the things that we think are important to have before you from our annual report which was forwarded I believe, on January 31.

I would like to start by expressing the deep appreciation I think we all feel for this committee's support and the Congress support in rebuilding the defenses in the first 2 years of this administration.

It was Congress actually that set the pace initially by appropriating funds above President Carter's request for fiscal year 1981.

It was Congress that made it possible for President Reagan to restore the basic readiness of our forces and also begin the long-term modernization program. I think it is clear that members of this committee have long been deeply concerned about the danger of a shift in the military balance.

I am delighted to acknowledge the debt that we all owe to you, this committee and the Congress, for the start which has been made. Our 1984 budget request is really only the final step in a year's work in formulating the whole defense program.

Long before we put any numbers to the program in that budget we tried to determine the nature and extent of the threat to our whole national security. We then developed the strategy to deal with the threat and those series of threats and then decided what capability would be required to put that strategy into effect. That is how we made up our budget.

U.S. STRATEGY FOR MEETING GROWING MILITARY THREAT

In our annual defense report the first section on policy begins by outlining the basic foreign policy goals and objectives necessary to achieve those goals and the strategy for meeting the rapidly growing threat. The strategy has been based on three main principles.

Our strategy is defensive. The United States does not start fights. It means that we therefore cede to our potential adversaries the advantage of surprise, and the opportunity to pick the time and place of conflict.

As a result, our forces have to be maintained in a very high state of readiness and our command and control communications and intelligence must be flexible and enduring and of course we must have the capability of mobilizing very quickly.

Second, the strategy is to deter war as it has been the strategy of the United States since the end of World War II. For this we need a very strong and survivable nuclear force. We also need a strong conventional force designed to convince any potential adversary that the cost of aggression would be much too high to justify any attack.

Finally, should deterrence fail for any reason, then our strategy has to be to restore peace on favorable terms to the United States at the lowest possible level of conflict. For this we need mobile, flexible, and sustainable forces and capabilities.

BUDGET PROGRAMS

Once we have formulated our defense policy with an objective look at the threats we face, then, of course, we have to budget to carry that out. That has to be done with an honest look at the available resources.

Part 2 of our report reviews not only the resources, but also our manpower, our industrial base, and what we might call our entrepreneurial resources, that is the ability to spend the taxpayers' dollars efficiently.

Finally, part 3 describes the programs we are requesting in the budget of $274.1 billion in total obligational authority. We, of course, are not going to go through all the programs this morning, but we will be able to respond to any inquiries you might have about specific programs.

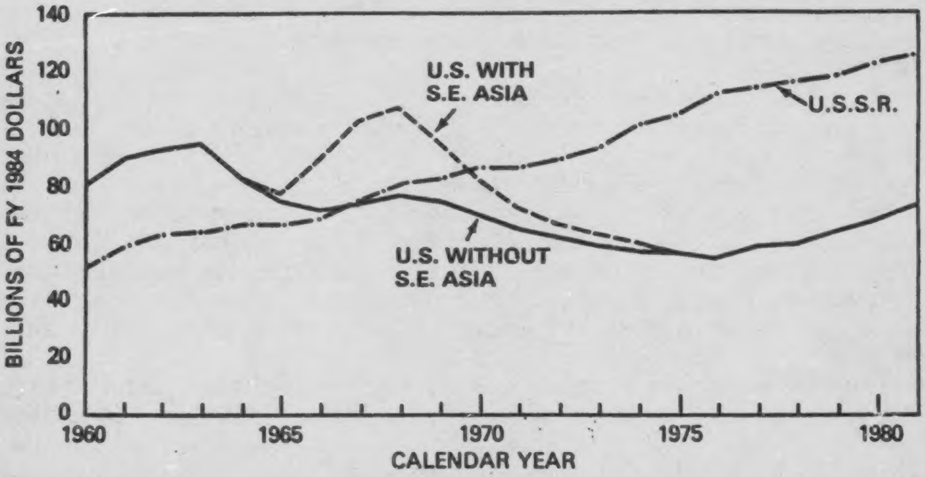
I would like to make a couple of points about the whole program:

First, we have to develop a responsible and a balanced understanding of the threat that we face and that the Soviet Union now poses and, so far as we know, will for the foreseeable future continue to pose—the most formidable threat to the United States and to all our interests.

There are threats that arise independently of the Soviet Union, but more often than not the magnitude and persistence of these other threats and our difficulties in encountering them are greatly aggravated by Soviet policies, backed by the expanding reach of Soviet military power.

For 21 years the Soviets have built up their military. That fact, coupled with the failure of our allies and the United States to make a measured response, has resulted in a dangerous shift in the global military balance. That shift has occurred because the Soviet Union has outspent and outproduced the United States for at least a decade.

U.S. AND SOVIET MILITARY INVESTMENT TRENDS



Notes:

- Investment Comprises Outlays for Procurement, Military Construction, and RDT&E
- U.S.S.R. Investment Is an Estimate of What It Would Cost the U.S. to Duplicate Soviet Investment Activities
- SEA: Southeast Asea (Vietnam War-Related) Investments

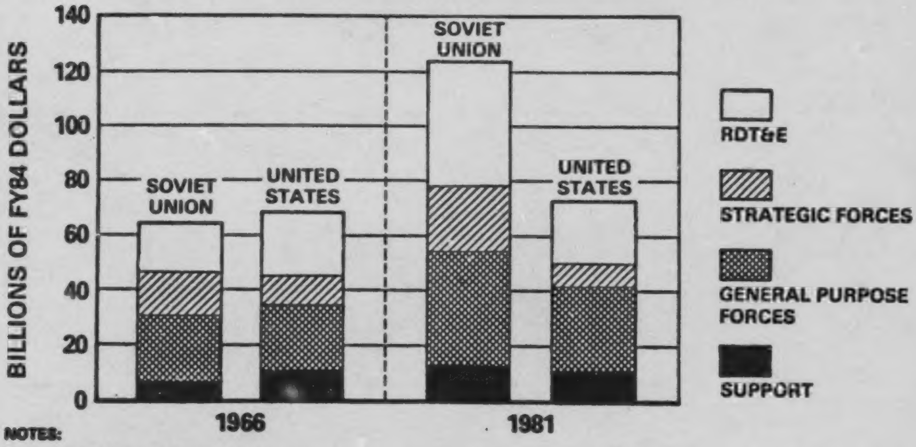
CHART 1

MILITARY INVESTMENT TRENDS

Now, this first chart shows the investment trends, that is, the money that each side spends on procurement, military construction, and research and development. The dash-dot line is the Soviet Union, the solid line is the United States.

It shows a downward trend except for that bulge in the 1960's which was, of course, the spending for the Vietnam war which did nothing, frankly, to strengthen us militarily in the long run and obviously did a great deal to weaken us.

You will see that the chart shows that we have started on a path that will enable us in the outyears—running out to the end of our 5-year plan—to narrow the gap with the Soviets. It will never cross the line. We are not asking for enough to get us to the point where we are spending more than the Soviet Union, but we are going to close that gap with a deterrence strategy that is enormously important.



U.S. AND SOVIET MILITARY INVESTMENT BY MISSION AREA

NOTES:
- MISSION AREA TOTALS INCLUDE OUTLAYS FOR PROCUREMENT AND MILITARY CONSTRUCTION
- RDT&E IS FOR ALL MISSION AREAS
- U.S. INVESTMENTS FOR THE VIETNAM WAR ARE EXCLUDED
- SOVIET INVESTMENT IS AN ESTIMATE OF WHAT IT WOULD COST THE U.S.
- TO DUPLICATE SOVIET INVESTMENT ACTIVITIES

CHART 2

INVESTMENT COMPARISONS

The next chart shows the comparisons of how these investments are broken down by various mission areas. In 1966 you see we were relatively even in the investment dollars and not too disparate in the ways in which these investment funds were invested.

In research and development we were spending a bit more, but in strategic forces the Soviets were spending quite a lot more. For general purpose forces we were relatively even, and again on support we were spending more. But this changed dramatically by 1981 when their investment in nuclear forces had grown to about three times ours.

Their investment in general purpose forces was 50 percent higher. Their investment in research and development was about twice ours. The change between that and the 15 previous years is very marked.

Then the more important thing really, Mr. Chairman, is what were they getting for this investment. That is depicted on the next chart.

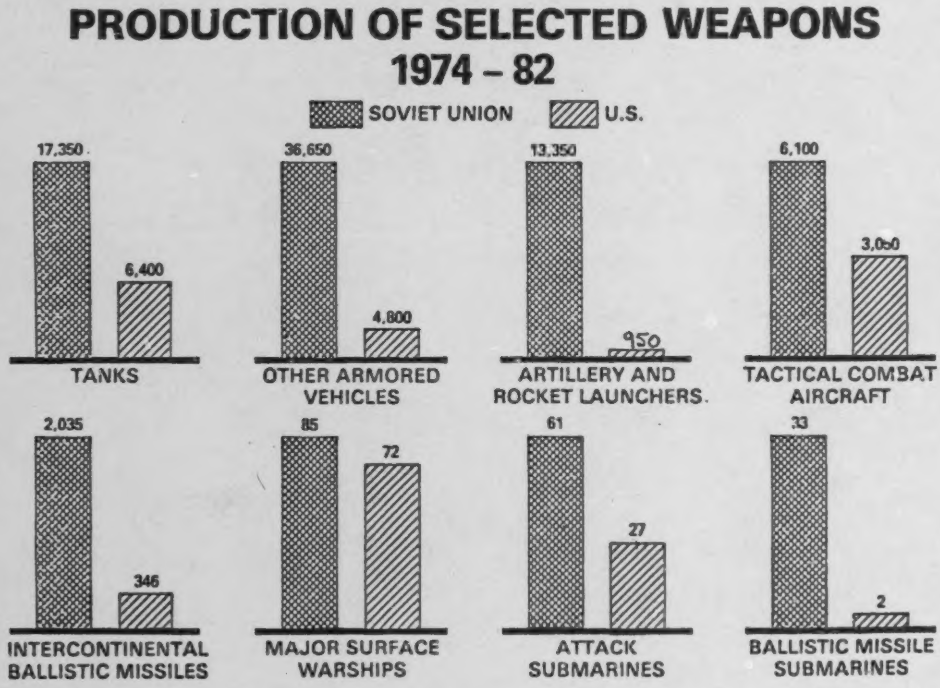
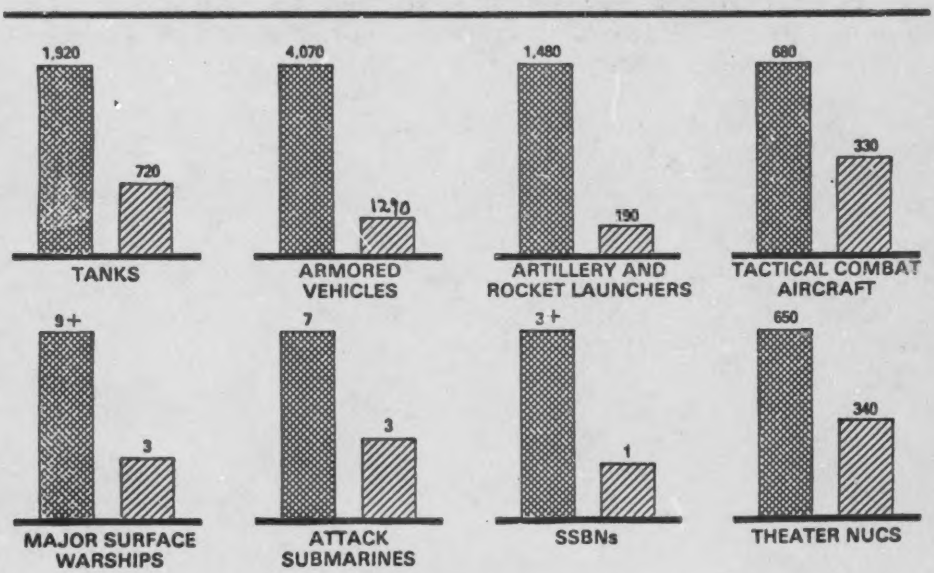


CHART 3

WEAPONS PRODUCTION

During this period between 1974 and 1982 these are the production rates and production output for selected weapons, both by the Soviet Union and by the United States. You can see the tremendous difference in tanks, in armored vehicles, in artillery and rocket launchers, 13,000 to our 900; tactical combat aircraft, twice as much, 6,100 to our 3,000. Intercontinental ballistic missiles, over 2,000 to our 346; surface war ships, a little closer, but still in the lead; attack submarines, almost 3 times; ballistic missile submarines, 33 to our 2. This is what they obtained for the investment they put in.



A COMPARISON OF AVERAGE ANNUAL SOVIET PRODUCTION AND FY 1984 U.S. REQUESTS

CHART 4

UNITED STATES/SOVIET PRODUCTION-REQUEST COMPARISONS

The chart I find, however, that is even more worrisome and even more troublesome is the chart that is now displayed. The red bars show what the Soviets acquired each year, or an average acquisition by them each year for their major weapon systems.

The blue shows what we would acquire if our budget for this year is fully funded. Again you will see there is no discussion here or suggestion that we are trying to outrace the Soviets or get military superiority or anything of the kind. We are trying to overcome a very substantial deficit that has built up over the years.

On tanks for that 8-year period, each year on an average they produced 1,920, some years more than that, some years a little less. We will get 720 this year if our full budget is funded. It is the same if we compare armored vehicles, 4,070 to our 1,290; in the artillery and rocket launcher area, 1,480 to our 190. On tactical aircraft, 2 to 1, 680 to 330, or a little better than 2 to 1. On surface warships, nine to our three; attack submarines, seven to our three.

These red bars are average annual additions to the Soviet arsenal. The blue is what we would get this year with full funding of our budget.

We have had, of course, superior technology in the past. We have always had much higher quality weapons. We have always held a sort of assumption that the Soviet weapons really were not all that sophisticated or incorporated high technology. That assumption can no longer be made because it is wrong.

They are making extremely good, sophisticated, accurate, and lethal equipment. We can no longer feel that simply because they are doing more doesn't matter because we have so much better weapons. We are not at that stage because a great deal of our technology that we had has gone over to them through one route or another. It has added to their technology, and to the quality of their weapons very much.

SOVIET GLOBAL POWER PROJECTION

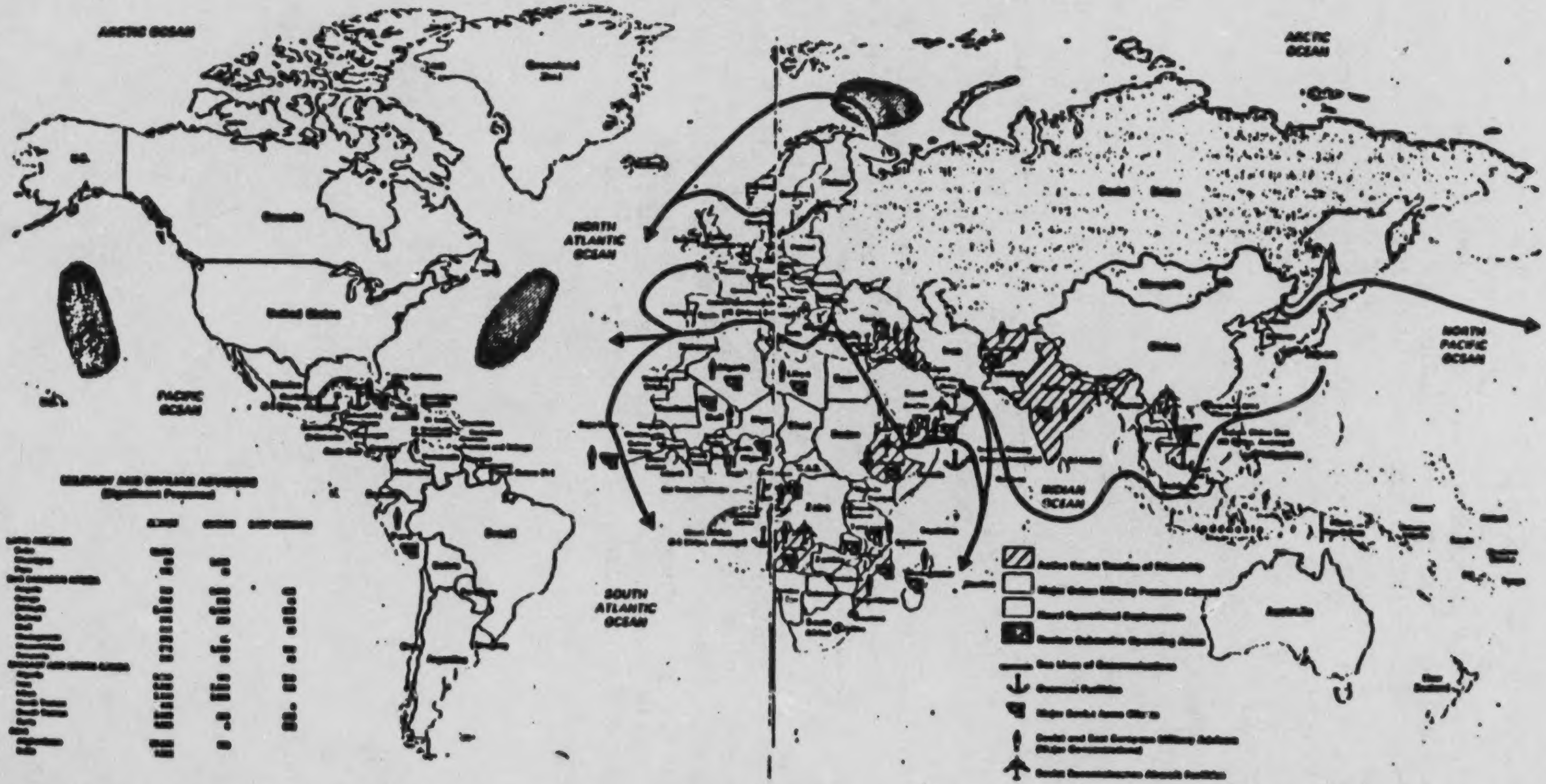

ARCTIC OCEAN
Canada
United States
PACIFIC OCEAN
NORTH ATLANTIC OCEAN
SOUTH ATLANTIC OCEAN
Brazil
Soviet Union
Mongolia
China
INDIAN OCEAN
NORTH PACIFIC OCEAN
ARCTIC OCEAN
Australia

Chart 5

SOVIET WEAPON DISTRIBUTION

Secretary WEINBERGER. What are they doing with all these weapons? They have projected their power in a very substantial expansion in strategically important areas far from their periphery.

We see how their power and influence has extended through security and cooperative agreements worldwide. On this chart we see that the Soviet military presence, as indicated by the countries in red or where they have major basing facilities, the sealanes of communication that we have to use. Note how they are able to block, or in many cases, threaten the lanes at the choke points with bases that they have.

Then you will see major Soviet arms clients, indicated by the little symbol of the gun, with Soviet and East European military technical advisers, indicated by the figures that are there with major concentrations in those areas shown.

They have delivered arms on a massive basis to the Third World, actually double ours for the period 1977 to 1981. They have utilized Cuban and East Germans and/or Libyan military proxies in Central America and Africa. They have greatly increased their power projection capability by air and sea lift. They have expanded overflight and access rights to operating bases in major parts of the world.

Of course they have an occupying army in Afghanistan and a great many divisions deployed along the periphery of the U.S.S.R. and in Eastern Europe including ones threatening and intimidating Poland.

The cumulative effect of that buildup is to change the type of attack we might have to confront, the areas in which we can be attacked, and the effectiveness with which such an attack could be launched and thus, what we have to do to maintain security.

Now, a lot of people have said that defense should not be exempt from cuts, and defense has to take its share of the cuts in any kind of general attempt to reduce governmental spending.

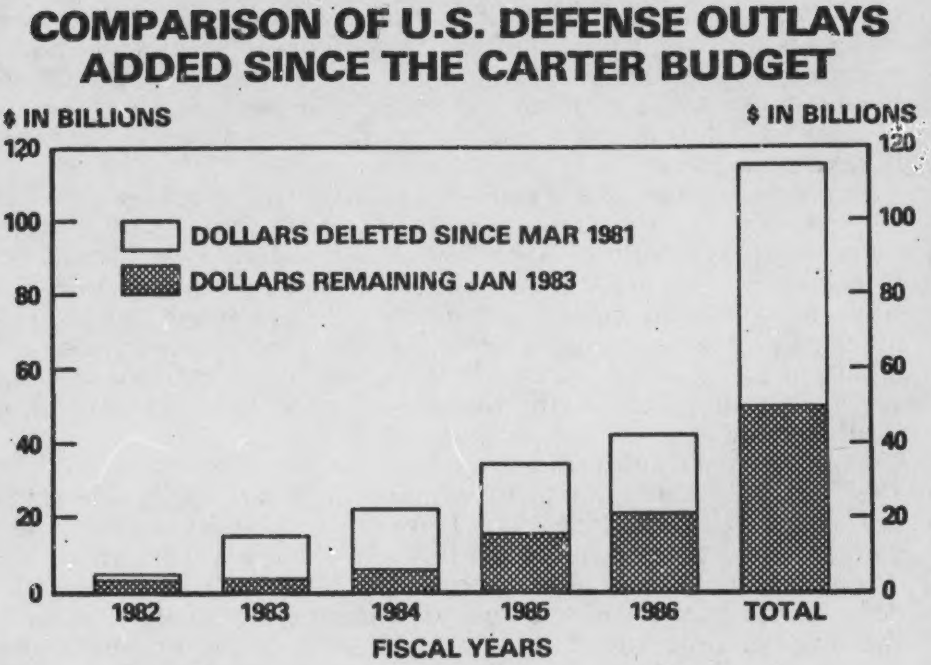


CHART 6

DEFENSE OUTLAYS SINCE CARTER BUDGET

The point on the next chart I would like to make is that defense has already taken those cuts and certainly has not been sacrosanct.

The total length of the bar indicates the amount of additional funding that the President concluded in March 1981, right after he arrived, would have to be added to the two budgets in inherited and the remaining 3-years of that 5-year period. This totaled $116 billion. That is what he felt should be added to those budgets for the period 1982 through 1986.

The red portion of the bar shows all that is left of those additions that he believed then were necessary. It is about $50 billion. Thus, $66 billion out of that $116 billion has been taken out. Some of it has been taken out because we have been much more successful in fighting inflation than we thought. That is a very satisfactory way to reduce the total amount needed, and we are delighted to do that.

A great deal has been taken out because of successive reexaminations and successive determinations by the President and by the Congress that defense spending should be lower from what seemed to be essential in March 1981. So, defense has not been sacrosanct in any way. We have taken cuts.

The other thing we have to bear in mind is that all through the period of the 1970's defense did take reductions. Before reaching that, however, I want to discuss a little about military personnel costs which are a major part of overall cost. Our budget is normally about 51-percent personnel cost. The comparable Soviet figure is about 16 percent, which says a lot about the difference between the two societies. This year our defense personnel costs will be about 42 to 44 percent because of a Government-wide pay freeze program which the President put in. With considerable reluctance, we decided this freeze applied also to the military, to freeze all Government payments, benefits, salaries, and retirement payments for either 1 year or 6 months at the same level as before in an urgent attempt to save some funds.

This does impact on the military, particularly in a year in which we have finally come close, to or have actually caught up to, competitive rates of military pay after years in which it was shamefully low. It was a very difficult decision for the President to make.

He felt he could not ask all of the other recipients of Government programs, including retirees, social security beneficiaries and others to accept a freeze in their benefits if it was not indeed a universal program. That is why reluctantly we reached the conclusion it also should apply to the military.

I will ask for a substantial pay raise for the military in the fiscal 1985 budget. I hope that will be enough to make up for this year's pay freeze. The President and I are fully committed to fair and equitable pay comparable to the levels in the private sector.

We do have to keep in perspective the total amount allocated for defense and bear in mind at no point during any of the 5 years of the original program of the President, nor of the present 5-year program, will defense spending exceed 33 percent of the total budget of the United States. We do have to keep that in perspective.

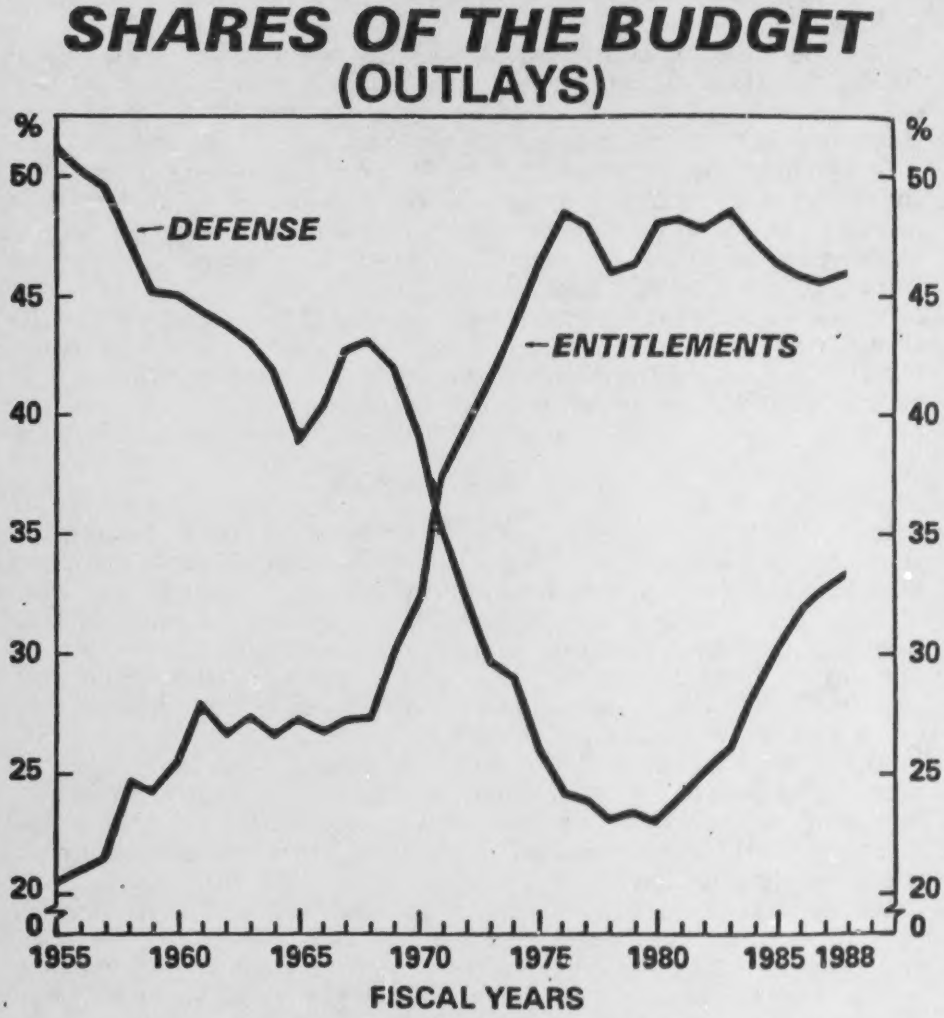


Chart 7

BUDGET SHARES

We also have to keep in perspective what happened over the years in the seventies. I said defense has taken its share of cuts since the President came in, but defense took its share of cuts long before that.

Through the whole decade of the seventies defense spending in real terms declined 19.6 percent. Nondefense spending entitlements were going up during that same decade of the seventies about 122 percent.

As you will see in the 1955 period, defense spending was about 52 percent of the budget; entitlements were about 21 percent. That has been totally and completely reversed now with entitlements running close to 50 percent. They will shade down a little bit during the course of the next 5 years if the President's program is adopted.

Defense spending continued all the way down in the eighties and finally did start on up. Through 1988 it will reach, about 33 percent, never more than that, of the total budget. It is fair to keep this perspective in considering the total amount of the budget.

Frequently the figure of $1.6 or $1.5 trillion is used to describe the President's military program. No one has ever bothered to mention, that I am aware of, except a few of us crying out in the wilderness, so to speak, that the rest of the budget during that same period will total about $2.7 trillion.

These are enormous figures, but they are figures that reflect the things that the Government is doing and, in the case of defense, the things that we think they have to do. It is proper to keep it in perspective. We are never talking about more than a third of the budget even though in the fifties over 50 percent was for defense.

LONG-TERM PROGRAM

It is a long-term program, Mr. Chairman. We have to recognize that the 1984 budget, as I mentioned to Senator Rudman, is just 1 year in a long-term program to restore our defenses. It is very hard to keep the attention and support of the country during all that period of time because these again are never expenditures that are popular with people in our type of society. We understand that clearly. But it also means that we didn't begin this defense program with a clean slate.

Again, as we discussed early in this hearing, we take over and seek appropriations for a number of programs that are underway, including defense weapons and systems acquisition programs that don't meet all the specifics we would like. Some cost more than we think they should have.

We have reached the conclusion in those cases that it is necessary to continue and improve what we have, otherwise we would leave a very big gap while we are trying to develop something new.

That was the case of the M-1 tank. For almost 20 years we knew if we ever had to go to war, we would have to send men to war in a tank that we knew was inferior to the Soviet tank. That is a pretty heavy responsibility which I don't want to have to bear and I don't think anybody in the Congress wants to bear.

This long-term program means that together we have to accept the fact that we are in business for the long haul. Together we have no higher responsibility than to provide for our Nation's security. I think it is essential that we do that.

Well, the facts are clear enough. The resistance is there. The real resistance is that when you accept the facts of the threat, you accept the need for a major sustained response, and that is something that people are really unwilling to do in most cases. But we have to bear in mind what we confront is an offensive strategy with offensive weapons that have been acquired by the Soviets and against which require very considerable vigilance to maintain and secure a proper and effective deterrent.

If deterrence succeeds, it is easy to say, well, it was simply because the other country's peaceful intent or spirit of detente or growing interdependency led to no war. Of course if deterrence fails and the opponent has deliberately weighed the risks and still decided the balance is enough in his favor to attack, then the dividends of a viable defense are unquestioned.

The problem is unless you have acquired such defense and such a deterrent, unless it is in being and at the ready, it is too late to regain it after the war starts. We cannot wait to restore strength. We have to do it now, this year, in this budget and we have to continue it for a number of years as we have continued it from 1981. We really have to do double duty now.

We have to increase the readiness and sustainability of our forces to be prepared for an immediate crisis should one occur, and indeed the best way to prevent a crisis from occurring is to be strong and prepared.

At the same time we have to make up for lost years of investment by undertaking research and development and force modernization at the strategic level as well as conventional. We simply cannot avoid doing that double duty or we will endanger our immediate security.

We can imperil the Nation I think if we allow our deterrent capability to weaken to the point of danger. That is something I think we are all determined not to do.

Mr. Chairman, I appreciate very much the opportunity to make this statement. General Vessey may have a statement, then we will be very glad to take your questions.

[The statement of Secretary Weinberger follows:]

PREPARED STATEMENT OF HON. CASPAR W. WEINBERGER

SECRETARY OF DEFENSE

MR. CHAIRMAN, MEMBERS OF THE SUBCOMMITTEE:

THANK YOU FOR THIS OPPORTUNITY TO OUTLINE THE DEFENSE POSTURE OF THE UNITED STATES.

THE FY 1984 BUDGET REQUEST ITSELF IS ONLY THE FINAL STEP IN DESIGNING OUR DEFENSE PROGRAM. BEFORE WE PUT NUMBERS TO PROGRAMS, WE HAVE DETERMINED OUR OVERALL NATIONAL SECURITY OBJECTIVES, THE MILITARY THREATS POSED TO THOSE OBJECTIVES, OUR DEFENSE STRATEGY TO DEAL WITH THESE MILITARY THREATS AND, FINALLY, THE FORCES WE REQUIRE TO IMPLEMENT THAT STRATEGY.

IN MY TESTIMONY LAST YEAR I FOCUSED ON THE MODIFICATIONS THAT WE HAD TO MAKE TO THE MILITARY STRATEGY AND DEFENSE POSTURE THAT WE INHERITED. IN SOME CASES, WE FOUND THAT THE POLICIES WE INHERITED DID NOT CONFORM TO THE INTERNATIONAL REALITIES WE FACED, AND WE HAD TO MAKE SOME CHANGES. TODAY I WANT TO DISCUSS OUR ENTIRE POLICY FROM A BROADER OUTLOOK, CONSIDERING BOTH THE REFORMS WE HAVE MADE, AND THE ENDURING PRINCIPLES FROM THE PAST THAT TOGETHER FORM THE FOUNDATION OF OUR CURRENT DEFENSE POLICY.

NATIONAL SECURITY OBJECTIVES

AT THE OUTSET, IT MAY BE USEFUL FOR US TO RECALL THAT OUR OVERALL NATIONAL SECURITY OBJECTIVES, IN A VERY ABBREVIATED FORM, ARE:

- TO DETER MILITARY ATTACK AGAINST THE UNITED STATES, ITS ALLIES, AND OTHER FRIENDLY COUNTRIES.
- IN THE EVENT OF A CONVENTIONAL ATTACK, TO DENY THE ENEMY HIS OBJECTIVES AND BRING A RAPID END TO THE CONFLICT ON TERMS FAVORABLE TO OUR INTERESTS.
- TO PROMOTE MEANINGFUL AND VERIFIABLE MUTUAL REDUCTIONS IN NUCLEAR AND CONVENTIONAL FORCES.
- TO INHIBIT FURTHER EXPANSION OF SOVIET CONTROL AND MILITARY PRESENCE.
- TO AVOID SUBSIDIZING OR SUPPORTING THE SOVIET BUILDUP BY PREVENTING, IN CONCERT WITH OUR ALLIES, THE FLOW OF MILITARILY SIGNIFICANT TECHNOLOGIES AND MATERIAL TO THE SOVIET UNION.

THE SOVIET MILITARY THREAT

IN ASSESSING OUR ABILITY TO ACHIEVE THESE NATIONAL SECURITY OBJECTIVES, WE RECOGNIZE THAT THE SOVIET UNION POSES, AND FOR THE FORESEEABLE FUTURE WILL CONTINUE TO POSE, THE MOST FORMIDABLE THREAT TO THE UNITED STATES AND OUR INTERESTS. OF COURSE, WE RECOGNIZE THAT SOME

THREATS ARISE INDEPENDENTLY OF THE SOVIET UNION. BUT, MORE OFTEN THAN NOT, THE MAGNITUDE AND PERSISTENCE OF THESE OTHER THREATS AND OUR DIFFICULTIES IN COUNTERING THEM ARE GREATLY AGGRAVATED BY SOVIET POLICIES, BACKED BY THE EXPANDING REACH OF SOVIET MILITARY POWER.

THE 20-YEAR SOVIET MILITARY BUILDUP, COUPLED WITH THE COLLECTIVE FAILURE OF THE UNITED STATES AND OUR ALLIES TO MAKE A SUFFICIENT RESPONSE, HAS RESULTED IN A DANGEROUS SHIFT IN THE GLOBAL MILITARY BALANCE.

THIS GLOBAL MILITARY BALANCE HAS SHIFTED AGAINST US BECAUSE THE SOVIET UNION HAS OUT-INVESTED AND OUT-PRODUCED US FOR AT LEAST A DECADE. EVEN WHEN WE INCLUDE THE ALLIED EFFORTS OF EACH SIDE, WE FIND THAT THE WARSAW PACT HAS OUT-INVESTED AND OUT-PRODUCED THE NATO COUNTRIES.

(CHART 1: U.S.-SOVIET MILITARY INVESTMENT)

AS THIS CHART REVEALS, TOTAL SOVIET INVESTMENT IN FUTURE MILITARY CAPABILITIES -- THAT IS, FOR WEAPONS AND OTHER EQUIPMENT, CONSTRUCTION OF MILITARY FACILITIES, AND RESEARCH AND DEVELOPMENT -- IS ABOUT DOUBLE OURS.

(CHART 2: U.S. SOVIET MILITARY INVESTMENT
BY MISSION AREA)

THIS AGGREGATE COMPARISON CAN ALSO BE VIEWED IN ITS COMPONENT PARTS. AS THIS CHART SHOWS, DURING 1980-81 SOVIET INVESTMENT IN STRATEGIC NUCLEAR FORCES WAS ABOUT THREE TIMES HIGHER THAN OURS; ABOUT 50% HIGHER FOR GENERAL PURPOSE FORCES; AND ABOUT TWICE OUR RATE FOR RESEARCH AND DEVELOPMENT. THIS IS IN STARK CONTRAST TO THE SITUATION 15 YEARS AGO.

BUT, MORE IMPORTANT THAN THE "INPUT" -- WHAT THE SOVIETS SPEND ON DEFENSE -- IS THE "OUTPUT" -- THE TANKS, PLANES, SHIPS, MISSILES AND OTHER MILITARY HARDWARE THEY PRODUCE AND DEPLOY.

(CHART 3: U.S.-SOVIET WEAPONS PRODUCTION)

IN SOVIET MILITARY POWER WE PUBLISHED LISTS OF EQUIPMENT PRODUCED BY THE SOVIET UNION. ON THIS CHART, HOWEVER, WE ARE COMPARING PRODUCTION TOTALS ONLY OF EQUIPMENT ADDED TO THE INVENTORY OF SOVIET AND U.S. FORCES TO COMPARE ACTUAL MILITARY CAPABILITY. IF WE HAD USED TOTAL PRODUCTION FIGURES, WHICH INCLUDE EXPORT EQUIPMENT, THE IMBALANCE WOULD TIP EVEN MORE TOWARD THE SOVIET UNION.

THIS TREND IS EVEN MORE WORRISOME WHEN ONE CONSIDERS THAT THE SOVIET UNION HAS ALSO UPGRADED THE QUALITY OF ITS WEAPONS -- PARTICULARLY IN CONVENTIONAL FORCES. THE SOVIET UNION HAS ALWAYS FIELDED GREATER NUMBERS OF CONVENTIONAL WEAPONS WHICH WE OFFSET WITH SMALLER NUMBERS OF MORE CAPABLE EQUIPMENT. BUT NOW WE FIND THAT THE STEADY GROWTH IN SOVIET INVESTMENT HAS ALLOWED THEM TO PRODUCE INCREASINGLY MORE SOPHISTICATED WEAPONS SUCH AS THE POTENT T-72 TANK, ACCURATE AIR DEFENSE WEAPONS, AND FIGHTER AIRCRAFT CAPABLE OF OPERATING IN ALL TYPES OF WEATHER.

(CHART 4: U.S. SOVIET WEAPONS PRODUCTION IN FY 1984)

AS THE NEXT CHART ILLUSTRATES, EVEN THOUGH THE UNITED STATES IS NOW INCREASING ITS RATE OF WEAPONS PRODUCTION, THE NUMBERS SOUGHT FOR THIS YEAR WILL FALL FAR SHORT OF THE AVERAGE ANNUAL SOVIET PRODUCTION.

IN SUBMITTING THIS DATA FOR YOUR CONSIDERATION, I WANT TO EMPHASIZE THAT IT IS NOT OUR INTENTION TO MATCH THE SOVIETS TANK FOR TANK OR AIRCRAFT FOR AIRCRAFT. OUR INTENTION IS TO REGAIN AN EFFECTIVE DETERRENT AGAINST EITHER SOVIET CONVENTIONAL OR NUCLEAR AGGRESSION. WE RECOGNIZE THAT OTHER FACTORS BESIDES QUANTITATIVE COMPARISONS AFFECT THE MILITARY BALANCE. ONE OF THE MOST IMPORTANT OF THESE IS THAT THE SOVIETS HAVE MATCHED THEIR MILITARY BUILDUP WITH MILITARY AND POLITICAL EXPANSION INTO STRATEGICALLY IMPORTANT AREAS FAR FROM THE SOVIET PERIPHERY.

(CHART 5: SOVIET GLOBAL POWER PROJECTION MAP)

AS THIS MAP SHOWS, THE SOVIET UNION NOW HAS:

- ACQUIRED SECURITY AND COOPERATIVE AGREEMENTS IN AFRICA, THE NEAR EAST, SOUTHEAST ASIA AND SOUTHWEST ASIA.

- UNDERTAKEN MASSIVE ARMS DELIVERIES TO THIRD WORLD COUNTRIES -- DOUBLE THE AMOUNT WE SUPPLIED FROM 1977-1981.

- ACQUIRED CUBAN, EAST GERMAN AND/OR LIBYAN MILITARY PROXIES IN CENTRAL AMERICA AND AFRICA.

- GREATLY INCREASED ITS POWER PROJECTION CAPABILITIES.

- EXPANDED ITS OVERFLIGHT AND ACCESS RIGHTS TO OPERATING BASES IN KEY PARTS OF THE WORLD.

- OCCUPIED AFGHANISTAN.

THE CUMULATIVE EFFECT OF THE SOVIET MILITARY BUILDUP AND SOVIET EXPANSIONISM HAS BEEN NOT ONLY TO CHANGE THE TYPE OF ATTACK WE MIGHT CONFRONT AND THE AREAS IN WHICH WE COULD BE ATTACKED, BUT ALSO TO INCREASE GREATLY THE EFFECTIVENESS OF SUCH AN ATTACK. THE INCREASED SIZE AND QUALITY OF SOVIET FORCES HAS ENABLED THEM TO TURN FROM A DEFENSIVE FORCE POSTURE TO ONE INCREASINGLY STRUCTURED FOR OFFENSIVE USE. THEIR INCREASED NAVAL AND POWER PROJECTION CAPABILITY, COUPLED WITH THEIR ACQUISITION OF CRITICAL FOOTHOLDS IN STRATEGIC LOCATIONS THROUGHOUT THE WORLD, ENABLES THEM TO LAUNCH AND MAINTAIN CONFLICT IN SEVERAL THEATERS SIMULTANEOUSLY. THEIR BUILDUP OF NUCLEAR FORCES, PARTICULARLY ICBMS, ENABLES THEM TO THREATEN TO DESTROY A VERY LARGE PART OF OUR FORCE IN A FIRST STRIKE, WHILE RETAINING OVERWHELMING NUCLEAR FORCE TO DETER ANY RETALIATION WE COULD CARRY OUT.

DEFENSE STRATEGY

OUR DEFENSE STRATEGY FOR DEALING WITH THIS THREAT CONSISTS OF A SERIES OF DISCRETE BUT INTERRELATED ELEMENTS, SOME OF WHICH HAVE ENDURED FOR MANY YEARS, OTHERS OF WHICH ARE MORE RECENT IN ORIGIN. IT INCORPORATES THREE MAIN PRINCIPLES:

- FIRST, OUR STRATEGY IS DEFENSIVE. THAT IS TO SAY, IT EXCLUDES THE POSSIBILITY THAT THE UNITED STATES WOULD INITIATE A WAR OR LAUNCH A PREEMPTIVE STRIKE AGAINST THE FORCES OR TERRITORIES OF OTHER NATIONS.

- SECOND, OUR STRATEGY IS TO DETER WAR. THE DETERRENT NATURE OF OUR STRATEGY IS CLOSELY RELATED TO OUR DEFENSIVE STANCE. WE MAINTAIN A NUCLEAR AND CONVENTIONAL FORCE POSTURE DESIGNED TO CONVINCE ANY POTENTIAL ADVERSARY THAT THE COST OF AGGRESSION WOULD BE TOO HIGH TO JUSTIFY AN ATTACK.

- THIRD, SHOULD DETERRENCE FAIL, OUR STRATEGY IS TO RESTORE PEACE ON FAVORABLE TERMS. IN RESPONDING TO AN ENEMY ATTACK, WE MUST DEFEAT THE ATTACK AND ACHIEVE OUR NATIONAL OBJECTIVES WHILE LIMITING -- TO THE EXTENT POSSIBLE AND PRACTICABLE -- THE SCOPE OF THE CONFLICT.

TO CARRY OUT THIS STRATEGY WE HAVE EMPHASIZED THREE VITAL SUPPORTING POLICIES.

FIRST, THE UNITED STATES REMAINS PART OF, AND CONTRIBUTES TO, A COLLECTIVE DEFENSE POSTURE THAT INCORPORATES THE STRENGTH OF OUR ALLIES. THE NORTH ATLANTIC TREATY, THE RIO TREATY, THE ANZUS TREATY, AND OUR TREATIES WITH KOREA, THE PHILIPPINES, AND JAPAN HELP PROVIDE FOR AN EFFECTIVE COMMON DEFENSE AGAINST EXTERNAL AGGRESSION.

SECOND, TO BUTTRESS OUR COLLECTIVE SECURITY POSTURE, WE MAINTAIN FORWARD DEPLOYMENTS THAT, COMBINED WITH THE FORCES OF OUR ALLIES, PROVIDE THE FIRST LINE OF CONVENTIONAL DEFENSE IN WESTERN EUROPE, JAPAN, AND KOREA. IN THE EVENT OF WAR, WE WOULD REINFORCE THESE FORWARD-DEPLOYED UNITS RAPIDLY.

THIRD, WE SEEK A FLEXIBLE FORCE STRUCTURE THAT BUILDS ON OUR ALLIANCE COMMITMENTS AND FORWARD DEPLOYMENTS AND PROVIDES US A VARIETY OF OPTIONS FOR QUICKLY RESPONDING TO UNFORESEEN CONTINGENCIES IN ANY REGION WHERE WE HAVE VITAL INTERESTS TO DEFEND.

THE PROBLEMS WE INHERITED

WHEN THE REAGAN ADMINISTRATION TOOK OFFICE, WE FOUND INCONSISTENCIES BETWEEN THE EXISTING STRATEGY AND THE FORCES AVAILABBE TO CARRY OUT THAT STRATEGY. FURTHERMORE, THAT DEFENSE PROGRAM HELD LITTLE PROMISE OF PROVIDING EITHER THE STRATEGY OR THE FORCE POSTURE NECESSARY TO MAINTAIN DETERRENCE IN FUTURE YEARS IN LIGHT OF THE CHANGING SOVIET THREAT. THEREFORE, WE HAD TWO SIMULTANEOUS TASKS TO ACCOMPLISH. WE NEEDED TO MAKE OUR FORCES READY TO FIGHT IMMEDIATELY, SHOULD CONFLICT BE FORCED UPON US. WE ALSO NEEDED TO BEGIN LONG TERM IMPROVEMENTS TO OUR DEFENSE POSTURE SO THAT WE WOULD BE PREPARED TO MEET THREATS THAT MIGHT ARISE IN THE FUTURE.

OUR PROGRESS TO DATE - READINESS AND PERSONNEL

IN ORDER TO HAVE OUR FORCES READY TO RESPOND TO A CRISIS IN THE NEAR TERM, IT WAS NECESSARY TO IMPROVE QUICKLY THE READINESS AND SUSTAINABILITY OF OUR EXISTING FORCES. TO IMPROVE FORCE READINESS WE HAVE ALLOCATED RESOURCES FOR ADEQUATE MANNING AND TRAINING, MAINTENANCE, SUPPLIES OF SPARE PARTS AND AMMUNITION. WE HAVE INCREASED READINESS FUNDING CONSISTENTLY IN FY 1981, FY 1981, AND FY 1983. TO ATTRACT AND RETAIN QUALIFIED MEN AND WOMEN IN OUR ARMED FORCES WE INCREASED MILITARY PAY AND BONUSES. MILITARY PAY WAS INCREASED BY $3.2 BILLION IN FY 1981, $4.5 BILLION IN FY 1982, AND $1.5 BILLION IN FY 1983, FOR AN AVERAGE 11.7% PAY RAISE IN FY 1981, 14.3% IN FY 1982, AND 4% IN FY 1983.

AS A RESULT OF THESE EFFORTS BY THE ADMINISTRATION AND CONGRESS, THE READINESS OF OUR FORCES HAS ALREADY IMPROVED SUBSTANTIALLY ACROSS THE BOARD AND THE NUMBER OF FULLY OR SUBSTANTIALLY READY MAJOR ACTIVE UNITS HAS INCREASED BY ALMOST ONE-THIRD. TO IMPROVE UPON THE GAINS ALREADY MADE, FUNDING FOR READINESS CONTINUES TO BE A HIGH PRIORITY IN THE FY 1984 BUDGET.

THE CALIBER OF THE MEN AND WOMEN IN UNIFORM HAS ALSO IMPROVED DRAMATICALLY. DURING THE PAST YEAR ALL THE SERVICES MET OR EXCEEDED THEIR RECRUITING OBJECTIVES, AND 86% OF OUR NON-PRIOR SERVICE RECRUITS WERE HIGH SCHOOL GRADUATES, UP FROM 68% IN FY 1980. RETENTION SHOWED SIMILAR GAINS, WITH ALMOST 70% OF ALL ELIGIBLE PERSONNEL CHOOSING TO REENLIST IN FY 1982 COMPARED TO ONLY 55% TWO YEARS EARLIER.

THIS YEAR, WE HAVE ASKED OUR MILITARY PERSONNEL TO JOIN ALL OTHER RECIPIENTS OF GOVERNMENT PAYMENT IN A COMMON SACRIFICE BY FOREGOING A PAY RAISE IN FY 1984. BY DOING SO THEY CONTRIBUTE, ALONG WITH ALL OTHER GOVERNMENT EMPLOYEES AND BENEFICIARIES, TO THE IMPORTANT NATIONAL GOAL OF REDUCING NEAR-TERM BUDGET DEFICITS.

WE HOPE THAT THIS WILL NOT CAUSE RECRUITING AND RETENTION TO SUFFER. IF RECRUITING AND RETENTION DO BECOME ADVERSELY AFFECTED TO THE POINT THAT THE READINESS OF OUR FORCES WILL SUFFER, DURING THE COMING FISCAL YEAR, WE WILL OF COURSE RECOMMEND APPROPRIATE ACTION TO THE CONGRESS. ALSO, I WILL SEEK TO REPAY THE SACRIFICE WE ARE ASKING OF OUR MILITARY, WITH A SUBSTANTIAL PAY RAISE IN THE FY 1985 BUDGET -- ENOUGH, I HOPE, TO MAKE UP FOR THIS YEAR'S PAY FREEZE. THE PRESIDENT AND I REMAIN FULLY COMMITTED TO FAIR AND EQUITABLE MILITARY PAY THAT WILL BE COMPETITIVE WITH PAY LEVELS IN THE PRIVATE SECTOR.

SUSTAINABILITY

WE HAVE ALSO SOUGHT TO IMPROVE THE SUSTAINABILITY OF OUR FORCES. THE SOVIET UNION TODAY HAS THE WAR RESERVES TO FIGHT FAR LONGER THAN THEY COULD A DECADE AGO. IN ORDER TO ENSURE THAT THE SOVIETS NEVER CALCULATE THEY COULD SIMPLY OUTLAST US, OUR BUDGET REQUESTS RESOURCES FOR MORE

REPLACEMENT EQUIPMENT, SPARE PARTS, AMMUNITION AND OTHER ESSENTIAL CONSUMABLES, AND FOR A MORE RAPID EXPANSION OF DEFENSE PRODUCTION DURING AN EMERGENCY.

MODERNIZATION

IN ORDER TO PROVIDE THE FORCES NECESSARY TO ASSURE DETERRENCE NOW, AND INTO THE FUTURE, WE HAD TO BEGIN SIMULTANEOUSLY A SYSTEMATIC MODERNIZATION OF BOTH OUR CONVENTIONAL AND OUR NUCLEAR FORCES. WE DO NOT SEEK HIGH TECHNOLOGY WEAPONS FOR THE SAKE OF HAVING HIGH TECHNOLOGY. BUT, WE MUST FIELD WEAPONS THAT ARE SUPERIOR TO THE SOVIETS' WEAPONS AND TODAY WE SEE THAT THE SOVIETS ARE FIELDING MORE AND MORE HIGHLY SOPHISTICATED WEAPONS WHICH POSE NEW THREATS TO U.S. AND ALLIED FORCES. TO DETER, AND IF NECESSARY DEFEAT, THE USE OF THESE WEAPONS, WE MUST ENSURE THAT WE CAN COUNTER WITH IMPROVED CAPABILITIES OF OUR OWN.

CONVENTIONAL FORCE MODERNIZATION

THIS MODERNIZATION PROGRAM WILL PROVIDE ENHANCED CAPABILITIES FOR ALL COMPONENTS OF OUR CONVENTIONAL FORCES -- SO THAT THEY CAN COUNTER THE INCREASED SOVIET CONVENTIONAL THREAT. TO CITE ONE EXAMPLE, THE SOVIET'S BACKFIRE BOMBER PRESENTS A GRAVE THREAT TO OUR MARITIME FORCES THAT CAN BE COUNTERED ONLY BY SOPHISTICATED DEFENSES. THE BACKFIRE CAN FLY FARTHER AND FASTER AND CARRY MORE MISSILES THAN ITS PREDECESSORS; AND ITS MISSILES ARE FASTER AND HAVE A LONGER RANGE THAN ANY WE'VE FACED IN THE PAST.

TO DEFEND AGAINST THIS SOVIET CAPABILITY, WE NOW NEED BETTER EARLY WARNING FROM SATELLITES AND AIRCRAFT TO DETECT THESE BOMBERS EARLIER. AND WE NEED FIGHTERS WITH MORE ACCURATE WEAPONS AND IMPROVED RANGE TO INTERCEPT THE BACKFIRE BEFORE IT CAN LAUNCH ITS MISSILES. TO ACHIEVE THESE CAPABILITIES WE ARE UPGRADING OUR SATELLITES, AWACS, AND FIGHTERS. BECAUSE WE CANNOT HOPE TO DESTROY ALL THE BOMBERS BEFORE THEY LAUNCH THEIR MISSILES, WE HAVE ALSO DEVELOPED THE AEGIS, A CRUISER WITH A MISSILE DEFENSE SYSTEM WHICH HAS AN IMPROVED ABILITY TO DETECT LOW AND HIGH FLYING MISSILES. ITS SOPHISTICATED RADARS AND COMPUTERS CAN TRACK A LARGE NUMBER OF MISSILES AND AIRCRAFT SIMULTANEOUSLY; ITS AIR DEFENSE WEAPONS ARE EVEN CAPABLE OF DESTROYING MISSILES.

NUCLEAR FORCE MODERNIZATION

WE MUST ALSO MODERNIZE OUR NUCLEAR FORCES IN ORDER TO RESTORE THE BALANCE WITH SOVIET NUCLEAR FORCES. ALTHOUGH ALL OF OUR STRATEGIC FORCES ACCOUNT FOR ONLY 15 PERCENT OF THE DEFENSE BUDGET, THEY ENABLE US TO MAINTAIN OUR ABILITY TO DETER NUCLEAR CONFLICT NOW AND IN THE FUTURE, AND ALSO INCREASE THE LIKELIHOOD OF OBTAINING SIGNIFICANT, MUTUAL ARMS REDUCTION AGREEMENTS WITH THE SOVIET UNION. THE KEY COMPONENTS OF OUR NUCLEAR FORCE MODERNIZATION ARE PRODUCTION OF THE MX MISSILE, TRIDENT MISSILE AND SUBMARINE, B-1 BOMBER, PERSHING II AND GROUND LAUNCHED CRUISE MISSILE, AND IMPROVED STRATEGIC DEFENSE

AND COMMAND, CONTROL AND COMMUNICATIONS CAPABILITIES.

OUR NUCLEAR MODERNIZATION PROGRAM IS NOT DESIGNED TO ACHIEVE SUPERIORITY OR A FIRST-STRIKE POTENTIAL. WE RECOGNIZE THAT THERE CAN BE NO WINNERS IN A NUCLEAR WAR. BUT THIS RECOGNITION ON OUR PART IS NOT SUFFICIENT TO PREVENT THE OUTBREAK OF NUCLEAR WAR; IT IS ESSENTIAL THAT THE SOVIET LEADERSHIP UNDERSTAND THIS AS WELL. IF THE SOVIETS RECOGNIZE THAT OUR FORCES HAVE AN EFFECTIVE RETALIATORY CAPABILITY -- THAT THEY CAN AND WILL DENY THE SOVIETS THEIR OBJECTIVES AT WHATEVER LEVEL OF CONFLICT THE SOVIETS MIGHT TRY -- THEN OUR DETERRENCE IS EFFECTIVE, AND THE RISK OF WAR DIMINISHED.

BURDENSHARING

THE SHIFT IN THE GLOBAL MILITARY BALANCE AND THE POSSIBILITY OF THE UNITED STATES HAVING TO COMMIT FORCES TO DEFEND INTERESTS IN SOUTHWEST ASIA OR ELSEWHERE MEAN THAT ALLIED CONTRIBUTIONS TO DEFENSE MUST INCREASE. BUT THE CATALYST WITHIN NATO FOR INCREASED ALLIED CONTRIBUTIONS TRADITIONALLY HAS BEEN ACTIVE U.S. LEADERSHIP. WHILE OUR ALLIES SHOULD DO MORE, THE UNITED STATES CANNOT AFFORD TO DO LESS. WE HAVE SOUGHT TO IMPROVE ALLIED BURDENSHARING THROUGH SEVERAL PROGRAMS -- MOST NOTABLY POMCUS AND U.S.-GERMAN WARTIME HOST NATION SUPPORT -- DESIGNED TO STRENGTHEN NATO DEFENSE CAPABILITIES WHILE PROVIDING CRITICAL LOGISTICAL SUPPORT TO U.S. FORCES.

THE DEFENSE BUDGET

THOSE THEN ARE THE CHALLENGES THAT OUR DEFENSE PROGRAM ADDRESSES. BEFORE I CONCLUDE, I WANT TO CORRECT SOME MISCONCEPTIONS REGARDING OUR BUDGET FOR THAT PROGRAM.

(CHART 6: DEFENSE CUTS)

FIRST, THE DEFENSE BUDGET HAS NOT BEEN SACROSANCT -- IT TOO HAS TAKEN ITS "FAIR SHARE" OF CUTS IN THE REAGAN ADMINISTRATION. AS THIS CHART SHOWS, WHEN THE REAGAN FIVE-YEAR DEFENSE BUDGET WAS UNVEILED IN MARCH 1981, WE PLANNED TO ADD $116 BILLION TO THE CARTER ADMINISTRATION BUDGET FOR THE SAME PERIOD. NOW, LESS THAN TWO YEARS LATER, THAT FIGURE HAS BEEN REDUCED BY MORE THAN HALF. AND WE MUST ALSO RECALL WHY IT WAS NECESSARY FOR THE PRESIDENT TO ASK SUCH A LARGE INCREASE FOR THE 80's. IT WAS BECAUSE OUR NEGLECT OF OUR ARMED FORCES IN THE 70's COINCIDED WITH THE VAST INCREASES IN THE U.S.S.R. MILITARY STRENGTH DESCRIBED EARLIER.

BUT, THE CUTS WE HAVE MADE IN THE PRESIDENT'S DEFENSE SPENDING PLAN HAVE NOT SACRIFICED READINESS FOR MODERNIZATION. SINCE WE TOOK OFFICE OVER 100 MARGINAL WEAPONS OR EQUIPMENT PROGRAMS HAVE BEEN ELIMINATED, REDUCED OR MERGED.

THIRD, CUTTING BACK ON DEFENSE IS NOT THE SOLUTION TO THIS NATION'S VERY REAL DEFICIT PROBLEM. THE INCREASE IN DEFENSE SPENDING HAS NOT PRODUCED THESE LARGE DEFICITS, AND A DECREASE IN DEFENSE SPENDING, WHILE IT COULD ENDANGER

AMERICAN SECURITY, WOULD NOT CURE THEM.

(CHART 7: COMPARING DEFENSE AND ENTITLEMENTS)

OBVIOUSLY FEDERAL SPENDING LEVELS AFFECT THE SIZE OF THE BUDGET DEFICITS. IT IS TRUE THAT TOTAL FEDERAL SPENDING HAS GROWN SIGNIFICANTLY OVER THE PAST TWO DECADES. BUT, AS THIS CHART INDICATES, ENTITLEMENT SPENDING HAS SKYROCKETED OVER THE PAST 15 YEARS, WHILE DEFENSE SPENDING SLIPPED AND IS ONLY NOW APPROACHING ITS 1968 LEVEL. EVEN WITH THE CURRENTLY PROPOSED INCREASES, DEFENSE SPENDING IN FY 1984 WILL CONSTITUTE ONLY 28 PERCENT OF THE TOTAL FEDERAL BUDGET, IN SHARP CONTRAST TO THE 40-50 PERCENT SHARE ALLOCATED TO DEFENSE DURING THE 1950s AND 1960s.

FINALLY, I WANT TO ADDRESS THOSE WHO SAY "I AM FOR DEFENSE, BUT . . ." AND THOSE WHO SAY "I DON'T KNOW ANYTHING ABOUT THE DEFENSE BUDGET, BUT. . .

- WE MUST CUT IT TO REDUCE THE DEFICIT, OR
- WE MUST CUT IT IN FAIRNESS TO OTHER PROGRAMS, OR
- WE MUST CUT IT FOR A MYRIAD OF OTHER REASONS."

I MUST EMPHASIZE TO THEM THAT WE SIMPLY CANNOT REDUCE DEFENSE SPENDING ANY FURTHER WITHOUT UNDERMINING THE SECURITY OF THE UNITED STATES. WE CANNOT AFFORD A SITUATION IN WHICH LEGITIMATE AND NECESSARY DEFENSE SPENDING BECOMES THE "WHIPPING BOY" OF THOSE WHO LOOK ONLY AT BUDGET OR DEFICIT NUMBERS OR FORGET THAT THE SOVIETS ARE DRIVEN BY NO SUCH CONSTRAINTS. WE MUST NOT FORGET THAT DEFENSE NEEDS MUST BE DETERMINED BY THE THREAT TO OUR NATIONAL SECURITY THAT WE FACE.

WE MUST THEREFORE DEVELOP A RESPONSIBLE AND BALANCED UNDERSTANDING OF THE REAL MEANING OF THE THREAT WE FACE. THE DETAILED FACTS ARE CLEAR ENOUGH. BUT THERE IS GREAT RESISTANCE TO ACCEPT THE REAL MEANING OF THESE FACTS, BECAUSE TO DO SO IS TO ACCEPT THE NEED FOR A MAJOR SUSTAINED RESPONSE. CONFRONTED AS WE ARE BY ALL MANNER OF OTHER REAL OR APPARENT NEEDS, THERE IS A TEMPTATION TO ARGUE AWAY EVEN THE MOST OVERWHELMING EVIDENCE, WITH MISPLACED HOPE THAT WE CAN CONTINUE AS USUAL, PUTTING OFF OR CANCELING UNPOPULAR MILITARY NECESSITIES, AND INCREASING OUR SPENDING ON MORE POLITICALLY POPULAR DOMESTIC PROGRAMS. INSTEAD, THE REGRETTABLE FACT IS THAT, IN VIEW OF THE THREATS POSED TO OUR NATIONAL SECURITY, THIS COURSE IS NO LONGER OPEN TO US.

WE MUST ALSO RECOGNIZE THAT THE COMMITMENT TO DETERRENCE AND DEFENSE IS NEITHER EASY NOR INEXPENSIVE. WHEN IT CONFRONTS AN OPPOSING COERCIVE "OFFENSIVE" STRATEGY, IT REQUIRES CONTINUED VIGILANCE TO MAINTAIN. WHEN DETERRENCE SUCCEEDS, IT IS EASY TO ATTRIBUTE THE MAINTENANCE OF PEACE NOT TO THE CONTRIBUTION OF THE DEFENSE THAT ENFORCES THE DETERRENT, BUT TO A HOST OF MORE FACILE ASSUMPTIONS -- SOME IMAGINED NEW-FOUND "PEACEFUL INTENT" OF THE OPPONENT, THE SPIRIT OF DETENTE, GROWING ECONOMIC INTERDEPENDENCY, AND SO

FORTH. WHEN DETERRENCE FAILS, HOWEVER, AND THE OPPONENT HAS DELIBERATELY WEIGHED THE RISKS AND STILL DECIDED TO ATTACK, THE DIVIDENDS OF A VIABLE DEFENSE ARE UNQUESTIONABLE. BUT UNLESS SUCH A DEFENSE IS ACQUIRED, IS IN BEING, AND IS MAINTAINED AT THE READY, IT IS TOO LATE TO TRY TO REGAIN IT AFTER WAR BEGINS.

WE SIMPLY CANNOT WAIT TO RESTORE OUR MILITARY STRENGTH -- WE MUST DO IT NOW, THIS YEAR, IN THIS BUDGET. THE RAPID AND CONTINUOUS GROWTH OF SOVIET OFFENSIVE MILITARY POWER DOES NOT ALLOW US THE OPTION OF WAITING UNTIL AFTER THE ECONOMY FULLY RECOVERS, OR WAITING UNTIL AN EMERGENCY DEVELOPS.

THE PAST DECADE OF INADEQUATE DEFENSE SPENDING HAS FORCED US TO ACCEPT "DOUBLE DUTY." WE MUST INCREASE THE BASIC READINESS AND SUSTAINABILITY OF OUR FORCES TO BE PREPARED FOR AN IMMEDIATE CRISIS, SHOULD ONE OCCUR. AT THE SAME TIME WE MUST MAKE UP FOR LOST YEARS OF INVESTMENT BY UNDERTAKING THE RESEARCH AND DEVELOPMENT, AND FORCE MODERNIZATION -- INCLUDING THE MODERNIZATION AND STRENGTHENING OF ALL THREE PARTS OF THE STRATEGIC TRIAD -- THAT ARE NEEDED TO MEET THREATS THAT ARE LIKELY TO ARISE IN THE FUTURE. TO DO ONE AT THE EXPENSE OF THE OTHER OR TO STINT ON EITHER WOULD BE TO UNDERMINE THE SECURITY OF THE UNITED STATES AND THAT, LADIES AND GENTLEMEN, I, AND I HOPE YOU, ARE NOT WILLING TO DO.

STRATEGY PROGRAM

Senator **STEVENS**. Thank you, Mr. Secretary.

General, I want to congratulate you again on that magnificent statement you made at the National Prayer Breakfast this year. I hope all the people of the country get a chance to hear that sometime. You ought to use it as your recruiting statement.

General **VESSEY**. Thank you, Mr. Chairman.

I will be very brief since my statement will be in the record.

First, I want to say that the Joint Chiefs of Staff and the commanders of the unified and specified commands have participated fully in the development of the strategy and a program to meet that strategy. I want to report to you that the readiness of our Armed Forces is improving and has improved for the last several years.

PERSONNEL READINESS

One of the principal reasons that it has improved is that we have some of the finest Americans serving in the Armed Forces that I have seen in over the 40 years that I have served.

In fiscal year 1982 all the services met their recruiting goals. Eighty-five percent of those people who enlisted were high school graduates. About the same percentage were average or above in mental categories.

More importantly, all the services have been very successful in retaining qualified officers and noncommissioned officers, particularly those with technical skills. The readiness has improved for other reasons, too.

We have reduced the backlog of equipment maintenance. Flying hours for aircraft have been increased, as have steaming hours for ships, and we have improved our exercises. The investments we have made in training technology in the last 10 years has begun to pay off. The training is better.

The increased rate of modernization for equipment will begin to reach the forces this year. We are fielding good equipment. Troops are enthusiastic about the equipment that they are getting. It is not perfect, unfortunately, and I don't think it will ever be perfect, but it is far better than the equipment which it is replacing.

Unfortunately, defense posture is only relative. The Soviets have not been standing still.

BALLISTIC MISSILE PROGRAM

One factor the Secretary did not raise which I would like to raise with the committee is the fact that in ballistic missile warheads alone the Soviets last year fielded more MX quality ballistic missile warheads in their intercontinental ballistic missile force than we are planning to add to our force over the entire range of the MX program.

It is important that we maintain the momentum that has started, as the Secretary has stated, to keep to our steadiness of purpose in the programs we have underway, both because these programs are needed for our defense and secondly, because that is the most economical way in which to improve our defenses.

Mr. Chairman, I am ready for your questions.

[The statement of General Vessey follows:]

PREPARED STATEMENT OF GEN. JOHN W. VESSEY, JR., USA

CHAIRMAN, JOINT CHIEFS OF STAFF

Mr. Chairman, members of the Committee, I appreciate this opportunity to share with you my views on the defense needs of the nation.

The capabilities of United States forces are improving to face the growing threat. Clearly they are stronger now than at any time in the recent past; many needed programs have been set in motion. We can have considerable confidence in the forces we have, in their readiness, and in their ability to undertake assigned tasks. My confidence has been bolstered by what I've seen of our forces at home and abroad. But military strength is relative. The capability to deter threats against our interests cannot be viewed in isolation. Our posture must be judged against the capabilities of potential adversaries today, and the likely threats of the years ahead. Our national security is far from assured. We need to work together to reduce the risks to our security now and in the future.

The Soviet Threat

Peace in the world and our own security are challenged by the sustained growth of Soviet military power, and compounded by instabilities in many areas of the world--instabilities which are all too often exploited by the Soviets and those who assist them.

Soviet military power is a reality with which we must deal. Soviet military forces are large--about 5 million active in contrast to our 2 million active. Their forces are also well organized, well trained, and well equipped for a full range of military operations.

Soviet forces are designed for offensive operations while at the same time protecting the homeland from attack.

Soviet weapons are good, and the extraordinary Soviet effort in research and development, over 50 percent greater than ours, should guarantee that their weapons will also be good in the years ahead.

The Soviets continue to modernize their forces across the board and at a rapid pace.

Soviet training demonstrates the ability to use the forces effectively.

Strategic Modernization

We and our allies need military forces which, combined with our other strengths, will deter the Soviets from using their forces to threaten our interests. We need to continue the recent momentum in improving the manning, modernization, and readiness of our forces.

Few programs have received the attention now focused on our strategic nuclear force modernization. While we have been debating the need to modernize, the Soviets have been fielding modern systems, and developing and testing the next generation of improvements for their strategic forces. In the past two years, the Soviets have fielded many hundreds of new ICBM warheads with greater accuracy and improved hard target kill capability while we've fielded none. Another measure of Soviet activities in strategic forces can be seen in the test and training launches of strategic ballistic missiles. Last year the Soviets launched about 150 missiles compared to less than one-third that number for the U.S.

The Soviet nuclear threat makes clear the need to give our strategic forces the highest priority in modernization. We delayed modernization, and now we are faced with the need to modernize all legs of our TRIAD at the same time. To maintain our strategic deterrent, we need to go ahead with the prompt deployment of the PEACEKEEPER missile, TRIDENT submarine, B-1 bomber and cruise missiles.

Theater Nuclear Weapons

This committee is well aware of the details associated with our planned deployment of ground-launched cruise missiles and the PERSHING II missile under NATO's dual track decision of 1979. SS-20s continue to threaten the nations of NATO Europe and the forces of the alliance. Since last February, the Soviets have deployed over 50 additional SS-20 intermediate-range missiles pointed at our Western Allies; we have yet to deploy anything comparable. Our commitment to the elimination of the most destabilizing longer-range systems in Europe was reemphasized by the President just last month. There should be no question about the determination of the United States to strive for an arms control agreement which addresses legitimate security interests of the NATO Alliance. But barring a satisfactory agreement, it's essential that we move forward with plans to deploy the PERSHING II and ground-launched cruise missile.

Arms Control

We should continue to pursue nuclear arms reductions earnestly. Comprehensive, equitable, and verifiable arms reduction agreements could lessen the danger of nuclear war. But we must be guided by Soviet actions, not just their words. It is clear to me that our nuclear weapons modernization programs are needed not only to spur serious arms reduction negotiations and meaningful constraint, but to provide for our security after the negotiations are over.

Alliances

The defense of the United States will continue to depend upon a strong system of alliances and other security coalitions. Our firm commitment to NATO and other allies is consistent with the global defense requirements of this country. Our friends and allies contribute weapons, trained manpower, and facilities which support us and help defend shared interests.

There is an important interdependency among us. We should continue to refine with our allies the division of labor in our mutual security effort and encourage improvements in readiness and sustainability of combined forces. U.S. and allied forces must continue to strive for a high degree of interoperability. The Joint Chiefs of Staff and major commanders will continue to stress combined training and operations.

Allied host nation support for our forces can assist in implementing the agreed Alliance strategy at reduced costs and it should be supported.

The forward deployment of U.S. air, land, and naval forces remains a key ingredient of our strategy. Such forces demonstrate the strength of the U.S. commitment to collective defense and help provide a forward shield to permit reinforcing our allies when needed. The planned levels of those forces will allow necessary modernization to proceed and preserve their deterrent value.

Strategic Mobility

Our strategy will continue to depend heavily on strategic mobility. Mobility forces work hand-in-glove with forward deployed units to demonstrate our strength and bolster our deterrent capabilities. Today, our strategic mobility is improving, but it is not yet adequate to move and support our forces for the tasks that may be assigned. The airlift and sealift improvements in the budget need to be pursued.

Technology

Sensible use of high technology multiplies the effectiveness of our forces. The size of the Soviet forces dictates that we use technology to overcome part of the disadvantage. We need to field high quality weapons and equipment efficiently and quickly. We must press on with programs which will allow our forces to maintain a technological edge and we need to get modern equipment into the hands of the troops so we can begin getting the benefits from it. We should lay to rest the notion that U.S. soldiers, sailors, airmen, and marines can't operate modern equipment. At the same time, we need to recognize that modern defense forces require good people. Our manpower programs must continue to be aimed at recruiting and retaining people with the aptitudes and motivations to operate modern weapons.

People

People will remain the cornerstone of our forces. The support of the Congress has been a key factor in the programs that have so greatly improved our total posture over the past two years--programs which reversed downward trends in recruiting and retention. Well trained, highly motivated service members will continue to be the heart of our combat readiness.

Pay and allowances, living and working facilities, the level and quality of the training, confidence in equipment, and the quality of leadership all have a great influence on the retention of good people in military service. This year the President found it necessary for military personnel as well as all other recipients of government payments to forgo pay raises. The Joint Chiefs of Staff understand the President's decision and, with the Secretary of Defense, hope that the action will not cause recruiting and retention to suffer. We cannot afford to commit the same mistakes we made in the 70's if we are to maintain the modern, ready forces this nation needs to deter war.

As you deal with the budget and programs for the years ahead, I urge you to do so in light of the very real security threats the nation faces today and those it will surely face in the future. Much as we might like to do so, we cannot roll back the calendar to days when we could rest safely behind our two ocean frontiers, mobilize our forces to go off and fight our wars in distant lands, and do so in our own time. Our safety and security are inextricably tied to peace in the rest of the world. Military force alone will not guarantee our security, but the lack of sufficient modern, ready military force of the kind needed to deter attack may well guarantee that we could lose our security.

SOVIET DEPLOYMENT OF MX-QUALITY MISSILES

Senator **Stevens**. I have a couple questions for you, but first, gentlemen, I trust it will be agreeable if we limit our questions to 10 minutes on the first go-around so that everyone might have an opportunity, should they have to go to another meeting, and we will endeavor to make sure that the Secretary makes his schedule.

General, did you say they are deploying more MX quality type nuclear warheads in 1 year than we will over the whole range of the MX program?

General **Vessey**. That is right, last year.

Senator **Stevens**. Mr. Secretary, last year we had a little bit of a go-around with the Department. We don't propose to repeat that this year. We felt that last year under the circumstances that faced the budget we had to have some guidance as to where to cut the budget.

I think it is clear to us this year that your role has to be to defend this budget. We want you to know that we are not going to put you through the same trial this time. You may not agree with the cuts, where we put them. We will be happy to have your guidance.

We know there will be cuts mandated by this committee. So we are going to try to proceed as best we can without putting you in that position again this year.

Having said that, let me go to two questions.

One, in your statement you made the point that military pay and the costs of personnel are sizable compared to the Soviets.

Secretary **Weinberger**. Yes.

Senator **Stevens**. In the last 3 fiscal years, as a matter of fact, military pay has increased 30 percent.

Secretary **Weinberger**. Yes.

MILITARY RETIREMENT PROGRAM

Senator **Stevens**. We were just given the figures yesterday that the retirement costs for the military are now more than 50 percent of payroll. Retirement costs for the civil service are 37 percent of payroll.

With that circumstance, is your Department reviewing the retirement program from a military point of view and will you be recommending to us any changes in the military retirement system as it applies particularly to asking military people, who are now comparable to their private sector counterparts, to contribute to their retirement as we are requesting and do request that civil service people contribute to their own retirement and most private sector pension plans require contribution from the employees?

Do you have any such program under study now in the Department?

Secretary **Weinberger**. Yes, Mr. Chairman, we conduct continuing examination of all the programs on personnel including retirement.

We have a couple of problems that are inherent in military retirement and they make it difficult, I think, to get immediate savings. The first problem is that there has been a commitment made by the Government to people who entered the service with respect to the system that was in effect then so that changes in the military retirement system, I think, can only come prospectively. The retroactive aspect of changes have both legal problems and problems involved in breaking of commitments.

The other thing we have to bear in mind is that a lot of people who are coming up on retirement age now in the military entered at a time when salaries were very much lower than they are now, and when benefits were very much reduced. They did so essentially on a promise that there would be—what you have identified as a generous—a retirement system. That system has been increased in generosity over the years.

For the future we are looking very hard at ways in which that system can be made less costly so long as we don't interfere with the actual recruitment and retention that is an essential part of the volunteer program.

General Vessey has identified the great success that that volunteer program is enjoying now. We want to make sure that the changes we make now don't have a bad effect on that for the future.

Within those limits of prospective application only, there are a few changes we can make immediately in the system, and we are looking at ways to make the retirement system less costly and more in line, now that the salaries have indeed finally caught up.

You are right, salaries have increased. It has been due to the generosity and support of the Congress and the President's own strong commitment to this program. So, we want to keep that salary range up all through the next years.

Retirement for the future, yes, we will look at with those points in mind.

Senator **Stevens**. Thank you.

PAY INCREASE

Mr. **Secretary**. We have legislation introduced now that will mandate a 4-percent increase for the military, notwithstanding the President's budget request. It is my understanding that if that passes, this committee will have no jurisdiction over the pay increase, it will be an entitlement then.

Have you made any review of the budget which has been presented to us to determine how that 4 percent would be absorbed?

I am certain with the cut coming, we all know there is a cut mandated, coming to this committee, if there is a 4-percent increase in payroll cost, it has to be absorbed. As a matter of fact, if there is a 4-percent increase, it is my understanding that it will be a 6½-percent cost as far as the budget is concerned because there is more than a 50 percent added cost for fringe benefits and retirement added to that cost.

Have you made any study how that is going to be absorbed?

Secretary **Weinberger**. No, sir, we have not because we have not seen the legislation that is proposed. I have outlined to you the President's program which we are, of course, supporting. That program calls for no increase this year and, as I have indicated to many and to you, I will make every effort to try to restore that sacrifice asked for this year in the 1985 budget. However I will provide for the record, the costs of such a propsal.

[The information follows:]

Impact of 4 Percent Pay Raise

The following table shows the required additional funding needed to finance a 4-percent across-the-board military pay raise effective October 1, 1983. Included are the additional cost to military retired pay that would result from a 4-percent pay raise as well as other increases in special pays that move with changes in military pay.

Fiscal year 1984:	*Millions*
Military pay	$1,502
Drag alongs [1]	105
Retired pay	14
Variable housing allowances (VHA) [2]	90
Total	1,711

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[1] Drag alongs include the following payments that are tied to the pay rate (reenlistment bonuses. cost-of-living allowances, separation payments, social security taxes, and dislocation allowances).

[2] In keeping with the decision to freeze pay and other entitlements, the fiscal year 1984 budget request disallows any increases in housing costs. However, if the pay freeze is lifted, then the freeze on implementing anticipated housing cost increases should also be lifted, thereby creating an increase in VHA payments.

RETIREMENT COMPARABILITY FIGURES

Senator **STEVENS**. Mr. Secretary, I would like to request that you ask the Department to prepare for this committee a study of comparability extending back from, and you pick a reasonable time, so that we can see how this comparability worked in the past and how it will project in the future, and in that analysis show us the increasing cost to the Government due to the retirement cost of the military?

Secretary **WEINBERGER**. Yes, we will.

Senator **STEVENS**. We have to assess this if we are going to be faced with the question of an entitlement in a pay raise that really is more than it appears. It means that our job of trying to comply with the budget resolution that we anticipate will be worsened.

Secretary **WEINBERGER**. We will do that.

Do I understand that the interpretation of this pending legislation is that it would make an automatic 4 percent increase each year without further congressional action being required?

Senator **STEVENS**. No. If there is legislation that passes that provides for a pay increase of 4 percent for the military, we would have no further control over that. We must fund that and you would have control over the number of people who are in the service, but we could not change the pay. We must fund it at the level of the entitlement.

So that if that passes, we then have to absorb a reduction which is not only the 4 percent, but it is also the added retirement cost and fringe benefit costs that are added on top of the 4 percent.

Secretary **WEINBERGER**. Unless that additional cost were added to rather than required to be absorbed?

Senator **STEVENS**. By definition, if we are required to cut the budget, some people say $15 billion, then we will have to absorb any additional pay cost unless they change that.

If the Congress wants to pass a 4-percent pay increase and say to the committee, you get that 6½ percent in addition, we are not going to hold you to the budget resolution, that point will be another matter.

I just want to make sure we have the charts. We have to have them to deal with the submissions of the Appropriations Committee for the budget resolution itself. I am sure you understand the problem.

[The information follows:]

ADJUSTMENTS IN MILITARY ACTIVE DUTY AND RETIRED PAY

Active duty military pay raises are linked under law to salary increases of federal General Schedule (GS) employees. GS salary increases, in turn, are based on a survey of selected occupations in the private sector called the Professional, Administrative, Technical and Clerical (PATC) survey. Because of the indirect linkage to PATC, comparisons between military pay raises and PATC increases have been used since 1972 to gauge the extent to which military pay has maintained comparability with private sector pay. The year 1972 was selected because, with the substantial increases made in first-term pay in moving to the All-Volunteer Force, it was generally agreed that comparability/competitiveness was achieved in that year. Military retired pay adjustments are based on inflation, not active duty pay increases. While the initial level of retired pay is based on active duty basic pay, increases in the Consumer Price Index are used to adjust military retired pay. Following is a table showing increases in active duty pay, retired pay, and PATC since 1972.

Date of active duty pay increase	Percent increase	PATC[1] increase	Date of retired pay increase	Percent increase
October 1972	6.0	5.8	July 1972	4.8
October 1973	7.3	5.4	July 1973	6.1
October 1974	5.5	6.4	January 1974	5.5
			July 1974	6.3
October 1975	5.0	9.0	January 1975	7.3
			August 1975	5.1
October 1976	4.8	7.0	March 1976	5.4
October 1977	7.1	6.9	March 1977	4.8
			September 1977	4.3
October 1978	5.5	7.9	March 1978	2.4
			September 1978	4.9
October 1979	7.0	7.8	March 1979	3.9
			September 1979	6.9
October 1980	11.7	9.1	March 1980	6.0
			September 1980	7.7
October 1981	14.3	9.7	March 1981	4.4
October 1982	4.0	9.5	March 1982	8.7
October 1983	0.0	[2] 6.5	April 1983	[3] 3.9
				[4] 3.3

[1] Measured from March to March over the previous year. For example, the October 1982 active duty pay increase was based on the increase in PATC salaries from March 1981 to March 1982.

[2] Estimated.

[3] Over age 62.

[4] Under age 62.

C-17

Senator **Stevens**. I have a series of questions I would like to present and have you answer for the record. Let me ask one last question. It is not provincial because I assume everybody knows this budget does not affect my State at all except for the money you spend for feeding people who occupy the bases in my State. We have no procurement of any kind in my State.

I have been sort of wedded to the concept of the C-17 and we held a hearing 2 years in a row and the Air Force people we relied on told us they wanted the C-17. We put $60 million in the budget last year to try to get the R&D completed for the C-17.

We note that this budget contains only $27 million which, as I understand it, will mean there will now be an additional stretchout of the C-17.

Is the Department against the C-17?

Secretary **Weinberger**. Mr. Chairman, frequently I am told I give the generals and admirals everything they want and we never examine any of their requests. That is not true. The C-17 is one of the examples where we examined very closely the nature of the request and the other available alternatives that we had.

The C-17 would be, I think, a good thing to have, a nice thing to have, because it would add to the ability to get in and out of somewhat smaller airfields than the C-5. But again it is a question of whether or not we are ever going to be able to make reductions in any of the planned programs.

We have not abandoned the C-17 concept by any means. You are correct that we have asked for less funding this year. We did make a substantial review of everything and did conclude that we could do with somewhat less in the research and development of that plane. This was because we were procuring, under the requests that are before you, the improved C-5 plane which is already designed and which has had the bugs worked out of it, and which will carry the outsize heavy cargo that we need to a great many airfields in the world.

So, that is why we have asked for somewhat less in the research and development work for the C-17. But it has not been abandoned, and it may well be that it will be possible to fund it later on. It is not anything that can give us the airlift additions that we need right now for improved readiness and improved capability.

That is why we ultimately came down with the recommendation for a proven plane that has been designed already and can go immediately into production.

Senator **Stevens**. Let me make this comment for those of us who have spent a lifetime dealing with aviation, and I have and others on the committee have, in the past when we acquired a new military transport, whether it was the DC-3 or DC-4 or DC-6 or one of the jets, the military led the civilian sector in the commercial aviation area.

When we got into the C-5A the civil air fleet just could not absorb the C-5A, never will. It is not built to have any kind of relationship to the civil air fleet. We are in a situation where some of us tried to get back to where we were oriented toward the research and development going on in the civil air component with the 747 concept as opposed to C-5. That was rejected by Congress.

To put the C-17 off to 1991 means for a period of almost 20 years the military aviation will be entirely separated from the goals of civil aviation. The C-17 could follow on in the next generation to meet civilian needs.

I don't see that we are working hand in glove any longer with the civil side as far as the acquisition of military aircraft. The C-17 had that capability. It was smaller than the C-5. It had a different capability and could go into the civil air fleet.

I don't understand the delay. I tell you I am going to try again to pick that up because I think the C-17 has a place in the future of civil aviation whereas the C-5B will not.

VOLUNTEER/COMPULSORY MILITARY SERVICE COSTS

Senator **Stevens**. General, I have but one question to ask you and it is an unfair one, but I am going to ask it anyway. Because of the increase in personnel cost, have you analyzed the problem in terms of whether we will have to go back to the draft in the near future?

General **Vessey**. No, we have analyzed it in terms of the increased personnel cost. That is a political decision that the people of this country are going to have to make.

If we are willing to pay for volunteers, it is clear that we can have a very fine peacetime force with volunteers.

What is not clear to me in the studies that I have seen is what is the difference in cost between volunteers and compulsory military service.

Now, if we go back to low wages that we had early in the forties and the fifties, certainly some cost saving could be made. But it is not as clear on the surface that there would be a cost saving because the number of careerists that are required to operate the modern technologically capable armed force is considerably higher. The percentage is much higher than it was in the past.

At the present time careerists in the armed service run over 50 percent. We are a more technical armed force than we were years ago. Just saying you need a bunch of 18-year-old people to come out and carry rifles or number 2D-handle shovels is no longer the case in the Armed Forces.

We have highly trained technical people. The longer they stay and do those technical jobs, the better they are. The number of people we are bringing in every year as a percentage of the force is going down.

So it really is not clear to me if there would be a saving in peacetime by going to the draft. That requires more study than I have put into it certainly.

Senator **Stevens**. General and Mr. Secretary, it is our feeling when the young people of this country wake up to the fact that we are borrowing the money today to pay for a volunteer force and they have to pay it back with interest over a period of maybe 20 years, we may see a change in the approach to the whole concept of the draft.

I think we ought to be studying what the cost factors are and present them to each generation and let them make that decision, particularly when we are at a deficit period, whether or not we are going to continue the volunteer service.

Senator Stennis.

Senator **Stennis**. Mr. Chairman, this is a good meeting. I have had a chance to hear these gentlemen before. There may be others on the committee that have not. I would like to pass for now.

Senator **Stevens**. I understand, Senator.

Senator Rudman.

Senator **Rudman**. Since I took a fair amount of time before, I am happy to yield to my colleague, Senator Kasten.

Senator **Stevens**. I prefer to do it on the basis we have said. We will recognize people in the order in which they came in. If you want to yield at this time——

Senator **Rudman**. I yield to Senator Proxmire. I do have a couple of questions.

Senator **Proxmire**. It is fine with me if you wish to go ahead.

COMPETITIVE PROCUREMENT PRACTICES

Senator **Rudman**. Mr. Secretary, back on September 9 of last year you wrote a very excellent memorandum entitled "Competitive Procurement." You sent it to the entire group that works for you over there, the Joint Chiefs, all the Under Secretaries and all the service personnel.

What you said there and I want to quote the controlling language, you said:

> The benefits derived from competition are well recognized. Competition serves to reduce cost, improve quality and enhance the industrial base which is so critical to defense mobilization. The policy to obtain maximum competiton as described by the Armed Services Procurement Act is reiterated by Executive Order 12352 and at various points in the defense acquisition regulations. It is our responsibility to assure that this policy is adhered to rigorously.

Looking at just the two major systems which are right now, according to the latest SAR's I have looked at in the high cost overrun category before DIVAD and the Bradley fighting vehicle, I want to ask you whether or not you have given any consideration to the fact that they are sole source, that they have continually had cost problems, and whether or not in envisioning the size of the buys that are eventually anticipated over the period, you have any current plans to try to compete some portion of those to see whether or not that might control cost.

Secretary **Weinberger**. Senator, the whole point that you made and that I tried to make in that memorandum, I certainly reassert and that is: there are great advantages to competitive bidding and we try to do it whenever we possibly can.

BRADLEY VEHICLE

In the case of the Bradley vehicle, we have a weapon system that we took over after a great deal of money had been spent in its development. In addition, contracts awarded and attempts to correct deficiencies in the vehicle itself were all being done within those executive-awarded contracts.

It is a little difficult and very expensive to stop that process, when you suddenly try to get contracts on a competitive basis for a weapon system that is already in progress when you have follow-on contracts where only the original bidder is really much interested in the bidding.

We have made substantial improvements as well as increases in competitive bidding through the emphasis that I have placed on it. We have added to, I think, the numbers of contracts, both in dollars and percentages, that have been awarded competitively.

We have to bear in mind one thing and that is you can't get competitive bidding if you don't have competitive bidders. You have to have more people willing to bid on these things. About 40 percent of our contracts now are awarded under competitive procedures. We would like to have more than that.

We expect that we will have more than that in the 1984 fiscal year. Again you have to look at the mix of what we are acquiring. If a large amount of our procurement dollars is going to buy, for example, tanks, Bradley fighting vehicles, submarines, carriers, things of that kind, these are in a sense either follow-on contracts or contracts by people who built the immediate predecessor.

They have an advantage that others in the field recognize, and so they don't bid on them. There is no question at all that competitive bidding has great advantages, but there is also no question that we are adding substantially to the amounts that we want to bid competitively.

In 1982 we had about $41 billion that was bid competitively and about $29 billion that was noncompetitive. These were primarily follow-ons or where we were ordering directly from a catalog. Everything included we had about $32 billion that was in fact truly noncompetitive.

By various ways of defining it, I think we are increasingly emphasizing the competitive aspects of our procurement and we certainly want to.

Senator **Rudman**. As you start new program acquisition, knowing what you know now about Bradley, about DIVAD, are you following an active policy of looking at these systems and saying, look, we had better have some checks and balances?

Secretary **Weinberger**. We are indeed. We will be glad to show you in detail some of the things where we have tried even with the competitive factor in mind, to seek bids that will indeed attract offers from more than one bidder.

[The information follows:]

Competition and Production

We continue to emphasize the early planning of competition in all phases of the acquisition process. This is an area that is considered during our DSARC review process and it is fair to say we have traditionally done a fairly good job of applying competition in the early phases of the acquisition process. The production phase has been the difficult phase to carry out competition and requires in-depth planning to set the stage for the introduction of competition. This is primarily being introduced by establishing a second source either at the prime or subcontractor/vendor level for the item. Examples of second sourcing at the prime level are the AIM-7M and Hellfire missile programs, and planning is underway on the F-15/F-16 Engine, AMRAAM, and IR Maverick programs. We have initiated second sourcing at the component level in a variety of programs. Some examples are the Bradley Fighting Vehicle track and firing systems, rocket motors and warhead components for missile programs, various ammunition and gun components, AIM-9M, and cruise missile components, and aircraft and ship components. Because of the sizable initial investment to introduce second sourcing, Dr. Richard D. DeLauer, Under Secretary of Defense for Research and Engineering, is personally reviewing plans for the second sourcing of major systems acquisition.

MULTIYEAR PROCUREMENT

Senator **Rudman**. One of the anomalies of the whole procurement system, it seems to me, lately has been in the multiyear procurement area that the Congress has encouraged you to follow. I have seen some examples recently where you had a contract to make a particular system, a competitor came in with a very substantially lower bid. I have seen this in several systems I have looked at in the last 6 months.

The original contractor comes back with a very attractive multiyear buy which any good manager feels he ought to take. Thus the competitor gets cut out of the system, thus narrowing the industrial base, and what I fear is that we have this broad multiyear buy without some at least significant second-source buys, we end up with a situation of having these multiyear folks a few years out essentially being back in a monopolistic position.

Secretary **Weinberger**. Again you put your finger on the balancing act we have to go through.

Multiyear procurement is very attractive in many ways. We are requesting some 14 programs be put under multiyear procurement this year. Most of these are programs in which we are pursuing procurement that has already started, and so the idea of competition is somewhat more limited in those areas.

In the programs last year, our estimate is that we saved over $1.3 billion as a result of having the multiyear procurement authority. We would certainly want to look carefully if somebody would say, "I can't offer you multiyear procurement, but I can give you a much better price one year on this."

If in fact we thought in subsequent years he might get in multiyear procurement, we would look into that. The savings long-run as well as the fact that we have in most cases eliminated problems that arise from the production of new weapon systems add a good bit of weight on that side.

The idea of competition broadening the industrial base as you said, and getting better prices, puts a lot of weight on the other side. You do have to balance it; there is no one answer by any means.

Having more competition is something I am strongly in favor of, and we try to get wherever we can.

RETENTION PRACTICES

Senator **RUDMAN**. Mr. Secretary, General Vessey, the Chief of Staff of the Air Force probably got into a little hot water a few weeks ago when he said he would prefer to cut back on some of his procurement, some of his acquisition, to make sure he had high retention and recruiting through maintaining the pay scales.

We won't get into a discussion about whether your middle enlisted grades are overpaid, because I am sure you will agree they are not overpaid. I am sure they are vastly underpaid as is much of the officer corps.

Given your own personal opinion of having pay maintained at its present level, let us say in the Army, the service from which you came, and creating 2,000 new combat divisions fully equipped vis-a-vis slowing down some of the procurement of some of the new systems such as Bradley, Abrams, DIVAD, and others, what would your choice be?

General **VESSEY**. I think it is clear that every member of the Joint Chiefs of Staff understands that the fundamental building block for a good armed force in this country is people and we need to enlist good people and we need to keep good people.

Now, it is also clear to us that it is not simply pay that keeps good people.

I just talked yesterday to a fellow who came back from commanding a division in Germany for 2 years and we were talking about what has changed in the army. We talked about the enthusiasm of the forces, and we talked about how important the modernization program is to keeping good people.

They understand that, now that their barracks are being fixed, they are getting the M-1 tank, the new equipment is coming, they are a much more capable force, sitting over there close to the east-west zonal border in Germany, facing the prospect of fighting the Soviets, faced with fighting them with more modern equipment.

So we have to do both. You just can't say let us hire good people and pay them well and not give them modern equipment. That is not satisfactory. The people understand that very quickly. We have to find a way to do both.

Now, every one of the Chiefs, I believe, would have preferred to keep the pay scales up to make sure that we retain good people, that we not make the mistake that we made during the middle seventies. That choice was not given them.

The President made the decision for the reasons that the Secretary pointed out. The Chiefs understood the decision. We had an opportunity before the President made that decision to tell the President personally what we felt about military pay and the retention of good people. Everybody did that. We all understand the decision.

Senator **Rudman**. Maybe we can find some of that pay and reduce a few of the systems because I think there is little sympathy for freezing military pay, because the military are underpaid and we will lose good people and we will not have the right people to operate the systems.

General **Vessey**. We cannot afford that. The Secretary has pointed that out.

Senator **Rudman**. Thank you very much, Mr. Chairman.

Senator **Stevens**. Senator Proxmire.

Senator **Proxmire**. Thank you, Mr. Chairman.

INFLATION ESTIMATES OF BUDGET

Mr. Secretary, in your discussion of your next to the last chart, "Comparison of U.S. Defense Outlays Added Since the Carter Budget", you have a spectacular cut in defense below what the President requested. You just threw in, as kind of a little observation without putting it in your text, the notion that some of that was the result of different inflation estimates.

Secretary **Weinberger**. There is no question about that, Senator.

Senator **Proxmire**. How much?

Secetary **Weinberger**. About $30 billion.

Senator **Proxmire**. About $30 billion of, what is it, 60?

Secretary **Weinberger**. Of 66.

We are very glad to acknowledge that. That indicates that we made great progress on inflation. Anytime we can buy anything for less than the estimate, that is great.

Senator **Proxmire**. I just want to know what it was because we did not know the exact amount until you just told us now.

About $30 billion?

Secretary **Weinberger**. About that, yes.

PAY INCREASE

Senator **Proxmire**. General Vessey, I am delighted to hear what you said about the importance of personnel and I agree wholeheartedly with what previous members of the committee have said here.

Two days ago former Secretary Laird wrote an article for the Washington Post in which he said it was far more important in his judgment to continue adequate pay for people in the military than anything else.

You said here what makes military units strong are the people in it. While there are many other things besides pay, as you point out, pay is one thing we can do something about and which we have woefully neglected over the years.

Could you not find an additional $3 billion somewhere in this vast defense budget to provide for 5-percent increase in 1984?

General **Vessey**. That opportunity, as I say, was not given to me.

Senator PROXMIRE. Suppose the opportunity were given to you?

General VESSEY. That is really the Secretary's business. The President made a decision and he did not give me that opportunity.

Secretary WEINBERGER. The civilian leadership carries a great burden in this. Let me tell you there is no one in Washington who felt more unhappy or reluctant about having the Government-wide program than me. But the President proposed to save some money to reduce the deficit and the freeze had to apply to the military as well.

We talked about it and agonized over it many times and concluded there was simply no way of having a Government-wide program of a universal freeze on benefits, pay and everything else unless it was indeed universal. If we started making exceptions, much as we wanted to do so, much as the President wanted to do so, you would have a situation in which the whole idea of making that saving would be riddled, and very shortly it would not be a savings at all.

Senator PROXMIRE. Looking at it from the psychology of keeping people in the military and keeping morale up, if we give them no increase at all because there is inflation, it means a real cut in real income for people in the military.

I know 2 years from now there will be a pay increase. There will be an intervening Presidential election. We don't know whether we will have a different policy. No one can tell.

It would seem to this committee that we would be best served if we are going to keep good people if we made sacrifices elsewhere if we can.

Secretary WEINBERGER. It is not a question of making sacrifices elsewhere in the defense budget. It is a question whether you want a universally applied program on freezes on pay, benefits, Government payments of all kinds, or whether you want to start making exceptions in it.

All the points you made, and I don't disagree with any of them, the President made them also in these decisions. We have the all-volunteer system working very well. It is one of our great success stories in the last 2 years, as you know. We are just very hopeful that the same sacrifice is being asked of everyone, not just servicemen as it used to be in the past, that this will make a difference.

I have to say that a very samll sample of the mail I have received indicates there is an understanding of this. But this does not change the reluctance with which the decision was made or the validity of the point you are making.

PROCUREMENT COMPETITION

Senator PROXMIRE. Mr. Secretary, let me follow up a bit on the questions that Senator Rudman asked about competition.

According to the GAO, the Army established a goal to achieve a 35.8-percent competitive rate for competition for 1982, 35.8 percent of the procurement would be by competition. I have three questions.

First, why is that goal that low?

Second, what accounts for the Army's poor showing of 14.1 percent in the first half of 1982?

And third, when will you give us the figures for the entire year 1982?

Secretary **Weinberger**. We will give you those figures just as soon as we have them.

Senator **Proxmire**. Which will be about when?

Secretary **Weinberger**. I think we can have those probably within a week. The Comptroller, Mr. Puritano, can answer more accurately than I can. We have the 1982 figures for the Department as a whole. So, I think we can do it.

[The information follows:]

Army Competitive Rate

The Army achieved a competitive rate of 40.3 percent in fiscal year 1982.

Secretary **Weinberger**. Those figures indicate part of the problem is that for straight competiton there was just about 40 percent competitive in the sense that we formally advertised, and asked for price competition, or we had a design competition. That was 40 percent or about $41 billion.

Then there is what we classify as noncompetitive or a follow-on after price or design competition has been held already someone won it or where someone is building something and you give a contract for some more, or you order it right out of a catalog, as a shelf item to get the lowest price.

Those two together totaled 28 percent or about $30 billion.

Then the truly noncompetitive. Is where you have to buy something and only one person applies, or you get it from a sole source. That was 31 percent.

So, we are not doing as well as I would like in the sense of being fully competitive. You do have to bear in mind that we can not force people to bid in many cases.

SINGLE SYSTEM PROCUREMENTS

General **Vessey**. I think I can add a little bit on the Army, as to why that percentage is so low.

One of the reasons is that the big dollar items in the Army's procurement program are procurements that have gone on for a number of years in the single system.

Senator **Proxmire**. They knew that when they established the goal?

General **Vessey**. The Bradley, the tank, the multiple launch rocket system.

Senator **Proxmire**. They knew that when they established the goal of 35 percent and you were only able to get 14 percent competitive. You established the goal. We didn't.

General **Vessey**. I didn't.

Senator **Proxmire**. The GAO said the Army established the goal.

General **Vessey**. I am just offering some explanation. You said why is it so low? I am not answering the question about the disparity between the goal and what it was.

PROCUREMENT IN NONCOMPETITIVE AREAS

Senator **Proxmire**. In that particular time, 6 months, you simply had procurement that was concentrated in those relatively noncompetitive areas.

General **Vessey**. A very high percentage.

Senator **Proxmire**. Mr. Secretary, the Congress is greatly handicapped by not having what is called a net assessment study made available to us. We get excellent data on the foreign threat, excellent data on your own programs. We get little or no data matching up the relative forces in NATO and Warsaw Pact nations under specific conditions.

I understand there is a special unit in the Department of Defense that conducts the net assessment. I think it would be very useful to the Congress in making appropriation decisions. Why can't you make those studies on net assessment available?

Senator **Stevens**. There is a schedule, Senator. We are going to schedule that hearing and we do every year. We postponed it this year because the same unit was busy on the other side. We have had that threat assessment briefing each year and it will be scheduled.

NET ASSESSMENT FACTORS

Senator **Proxmire**. I am talking about net assessment.

Secretary **Weinberger**. We will have a briefing that will cover many net assessment factors that is scheduled for another committee early next week. We will be delighted to make it available to you and all the members of the committee.

Some of the net assessment is highly classified and has to be delivered in closed session. Basically, we are perfectly happy to make it available to all of you and the studies that Senator Stevens referred to are coming up. We will have a special breifing for the purpose and we will make it available and let yu know through your staff when it is available.

PROCUREMENT, RESEARCH, AND CONSTRUCTION

Senator **Proxmire**. Mr. Secretary, the budget trend for the Department of Defense indicates an increase in the percentage of your budget going to procurement, research and construction from 36 percent in 1980 to 52 percent in 1988. It is a tremendous shift.

Doesn't that emphasis on hardware and research mean that these budgets are being front-end loaded in budget authority which will mean outlay increases in future years?

Secretary **Weinberger**. They will mean large outlay increases but that is not the purpose of the procurement. Procurement is based on the idea of what we view as necessary measured by the threat.

The outyear planning does take into account the additional cost of operating and maintenance and support that will be required. Our operating fund request, both the request and the plan from 1984 to the 1988 period, increases by $38.5 billion and that is what we believe is the required amount to deal with the increased procurement.

INFLATION IN NONPAY ACCOUNTS

Senator **Proxmire**. You estimate inflation for fiscal year 1984 though 1988 at 5 percent annually in nonpay accounts. That seems to be an extraordinarily low estimate, a very optimistic estimate in view of our recent historical experience certainly.

How do you justify that extraordinary improvement?

Secretary **Weinberger**. That is a Government-wide figure.

Senator **Proxmire**. Historically, in defense has it not been high?

Secretary **Weinberger**. For certain items we used 1.3 times the administration's projections for overall inflation for certain large items, or major commodities. But we use the administration's assumptions.

I have to say, Senator, and I recall it very well at my confirmation hearings, we were pretty well attacked for the idea that our inflation assumptions were much too optimistic then. As it turned out, they were too high.

Part of the reductions we put in came about because the inflation was a lot lower than we had estimated. These are estimates, and we put them in as we have to do for good planning. We change them whenever the facts justify or require it. We think this is a fair estimate, and it is an administration-wide estimate.

SUBMITTED QUESTIONS

Senator **Proxmire**. My time is up. Mr Chairman, I have four questions I would like to have submitted for the record if that is possible.

Senator **Stevens**. Yes, sir. We will be happy to do that.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

Defense Budget Justification

Question. Mr. Secretary, you have emphasized repeatedly, and correctly, that the defense budget should be linked to the nature of the foreign threat and not to domestic politics or internal economic factors. Given these statements by you and your top defense officials, why is it then that we also get the defense department talking about job production and job losses arising from budget changes; about comparisons of defense spending as a percentage of GNP which obviously is an economic based relationship; and defense spending as a percent of the federal budget

In other words, Mr. Secretary, don't you use employment, and other economic factors, to support your defense request?

Answer. While some economic factors may, in fact, support our budget request, we do not develop and defend our request on economic grounds. Our request is prepared based on an evaluation of the threat we face. We will continue the attempts we have made in the past to demonstrate the nature and size of the threat we face and the way in which our requests tie into our strategies of dealing with those threats.

Third Nuclear Carrier

Question. Mr. Secretary, earlier this year, you included a third nuclear aircraft carrier in the 5 year budget plan—two last year and the third in the out years. Now I understand that the third carrier has been dropped from the 5 year plan. What is the status of this third nuclear carrier and why was it included in the first place given DOD testimony last year that only two more carriers were on the drawing boards?

Answer. The 5-year shipbuilding plan that was submitted in support of the fiscal year 1984 defense budget does include a CVN in fiscal year 1988. This ship was included in the plan in the event the second carrier was not appropriated in fiscal year 1983. Funding last year of two Nimitz class nuclear powered aircraft carriers will permit Navy to achieve its goal of 15 CV/CVN by the end of calendar year 1989. Thus, fiscal year 1988 CVN will not be included in the fiscal year 1985 shipbuilding plan.

BURDENSHARING

Question. Mr. Secretary, what specific approaches are you making to our European allies to get them to support a higher level of defense costs to NATO?

Answer. The Secretary of Defense and other high level defense, as well as State Department, officials use every opportunity to encourage our allies to assume a more equitable defense burden. This is a major agenda item for discussion with virtually every senior government official from NATO countries that visits the Defense Department and when our officials visit NATO countries. In addition, this subject receives continual attention in bilateral and multilateral contacts at NATO ministerial level and other NATO meetings.

Examples of more formal negotiations currently taking place that impact burdensharing are the Master Restationing Plan with Germany and Collocated Operating Base agreements with various nations.

AEGIS COMBAT TESTING

Question. Mr. Secretary, is it true that the AEGIS fleet air defense system will be deployed at sea before any actual combat tests are conducted on it—as opposed just to simulations?

Answer. The first AEGIS ship, the U.S.S. Ticonderoga, will undergo an extensive series of tests prior to its first operational deployment later this year. These tests will include combat system qualification testing, operational testing and a fleet readiness exercise. Each of these three test phases will involve actual AEGIS missile firings against target drones. The operational test phase is intended to represent the actual combat environment as closely as possible, including the use of electronic countermeasures.

LONG-TERM PROCUREMENT COSTS

Senator STEVENS. Senator Huddleston.

Senator HUDDLESTON. Mr. Secretary, we are all aware that there is substantial sentiment in Congress for making some cuts in the proposals for defense spending. Defense spending, Mr. Secretary, and especially for procurement, as we know, spends out rather slowly, on an average of about 12 percent in the first year and 37 percent in the second year and 30 percent in the third year. Shipbuilding stretches out even longer than that.

If we are concerned about the large outlays that are going to occur in fiscal years 1985, 1986 and beyond from the requests that are being made now and we want to reduce those outlays, is there any way to accomplish that without eliminating some weapon systems?

Secretary WEINBERGER. Senator, we have some hopes and we have accomplished some reductions with respect to management improvement, procurement improvement, multiyear procurement, things of that kind. We believe savings can be made in that way. We have identified those and shown them.

The simple fact of the matter is that when you do have the need to add to your weapons structure or modernization large amounts of procurement are necessary. Bear in mind that we have not done any modernization for almost 20 years on all three parts of the strategic Triad, we do have to have modern or new generation equipment. On our ground-based ICBM missiles, for example, we are still only in the third generation; while the Soviets have deloyed the fourth and are working on the fifth, that is why large amounts of procurement funding are necessary.

As you correctly say, procurement accounts pay out in practically those averages, depending on what specific account it is. Over a longer period of time, they will build up the outlays from there. We have taken that into account in this whole 5-year plan.

The other point that we have to bear in mind is that about half of the procurement account is for readiness and sustainability: ammunition, spare parts, fuel, more training time, things of that kind.

SACRIFICES IN TRAINING COSTS

Senator **Huddleston**. When we commit ourselves to those long and big expenditures in the outyears, are you confident we are not in any way slighting the O&M budget, the training costs?

Secretary **Weinberger**. That has been done in the past but we are not doing it now. That is one of the things that does add up and make these items and totals very large in the outyears.

The procurement account, as I have said, is about 50 percent for support of readiness and sustainability and, of course, the other half is for modernization.

NEGLECTED MAINTENANCE ON MILITARY INSTALLATIONS

Senator **Huddleston**. When I was chairman of the Military Construction Committee a few years ago, at every facility we visited in the country commanders could show us some horror stories regarding neglected maintenance.

I don't think it has improved a lot since then. I hope we have a plan that will do that.

Secretary **Weinberger**. We think it has improved in getting the work done.

General **Vessey**. It has improved. Every single major commander has reported the increase in morale as a result of seeing the facility repair program.

Senator **Huddleston**. Isn't morale a key part in our readiness and preparation to be able to meet any challenge?

Secretary **Weinberger**. Yes, sir. We made reductions in the backlog of maintenance and repair [BMAR] in the 1984 budget. We can reduce those further in 1985.

Of course, they are recurring items. Each time you reduce a backlog, more piles up that has to be done. They are way under what they were. This is the easiest way to cut. A lot of people have followed this in the past and it has left us in a very——

Senator **Huddleston**. That is my concern: that we don't get so locked into systems that we find in outyears that we can't handle the O&M and the training.

Secretary **Weinberger**. Readiness is the highest priority that we have and the restoration of our strategic Triad strength is of the same general character. You can't sacrifice one for the other.

NEED FOR B-1 BOMBER

Senator **Huddleston**. Talking about systems, and I don't want to get into classified information—I am sure you won't—but in the bomber area, for instance, can we anticipate that the B-52's will continue to function and be serviceable up in the early 1990's.

Secretary WEINBERGER. No, sir, not on penetrating ability. They may be able to stand-off, but they can't penetrate.

Senator HUDDLESTON. As an ALCM launcher they would be effective until that time. The Stealth ought to be coming along.

Why do we need in between the B-1?

Secretary WEINBERGER. For this reason, Senator, and I will not get into classified matters, but I will be glad to go into it with you in a closed briefing, but essentially, the dates of the new bomber, the advanced bomber, are not known as to when it will be operational.

The B-52 will not be able to penetrate more than a short time, a year or two, depending on the degree of improvement and speed of improvement in the Soviet air defenses of course, they will be improving all along.

The B-1 will be able to penetrate well into the 1990's and will also thereafter have a very major conventional capability that the B-52 will no longer have. The B-52 is about 30 years old now.

REDUCTION IN ALCM PROGRAM

Senator HUDDLESTON. That being the case, why was the air-launched cruise missile program cut down?

Secretary WEINBERGER. Again, part of our reasoning must come in a closed hearing, but we have hopes for improvements in the air-launched cruise missile. The air-launched missile is not being closed down.

The idea of procuring the most effective and best one is always something we want to pursue.

Senator HUDDLESTON. Can we pursue that more vigorously and reduce the need for the MX?

Secretary WEINBERGER. I don't believe you could because you have a totally different capability between the two. We are reducing some of the procurement of existing air-launched cruise missiles as we try to develop an improved one.

MX MISSILE

Senator HUDDLESTON. Is the MX worth it in a mode that is not survivable?

Secretary WEINBERGER. Sir, the MX is essential, I think. We are not ready to concede it is not survivable. It is worth it because it adds to the deterrent capability. It would give us the only missile that we have anywhere near ready that can destroy Soviet hardened targets with both the required accuracy and yield.

TRIDENT II MISSILE

Senator HUDDLESTON. The Trident II?

Secretary WEINBERGER. The Trident II or D-5 SLBM will be available in 1989 which is 3 to 4 years after the time when the MX could have an initial operating capability. The Trident II is a submarine-launched missile and is certainly not ready now for ground deployment.

Yes, we think it is vital to keep the Triad. The redundancy of the Traid and safety of the Triad that we have had, has maintained defense for 37 years now. We do feel it is essential to have a land-based intercontinental missile of the kind that has both the accuracy and yield to deal with the improved hardened Soviet targets.

SUPPORTIVE ASSISTANCE OF U.S. ALLIES

Senator **Huddleston**. Since I have been in the Senate there has been continuous concern that the allies of the United States were not doing their share in the overall defense picture.

When the Persian Gulf oil came in jeopardy, even though our European allies were more dependent on that oil than we were, we bore the brunt of the defense measures that were taken there to secure that oil. The same is true with Japan.

Are you confident that we are getting as much assistance as we ought to be getting from our allies?

Secretary **Weinberger**. I am confident, that most all of our allies are making major efforts. I think we all need to do more, the United States, Japan, and NATO allies. I think we have to bear in mind two or three things: During the decade of the 1970's when we were going down, many of them were doing more on a proportionate basis than we were. Also, you can't get the full picture by reading just their defense budget. Japan puts in an extra billion dollars a year in various support activities and services for our forces that we would otherwise have to spend. The same is true in a number of NATO countries.

JAPANESE CONTRIBUTIONS TO DEFENSE EFFORTS

Senator **Huddleston**. Let me ask you this about Japan: We see them spending something less that 1 percent of their gross national product for defense. We see them saying that they are inhibited by a constitution which we fostered on them. We see our friends and others that are concerned about their developing too much capability beyond an absolute minimum expense.

Have you ever thought of asking them to make a contribution to their own defense by perhaps building a nuclear aircraft carrier for us?

Secretary **Weinberger**. No. We have had that suggestion made to us. The people in this country who build aircraft carriers take a dim view of that, and they have some objections to that, pointing out the number of jobs that would be exported and so on.

Senator **Huddleston**. The question is whether our defense program is supposed to be a jobs program or defense program.

Secretary **Weinberger**. It is not supposed to be a jobs program and it is not a jobs program. You should not have to spend a nickel for defense that you don't have to for defense, but it does produce jobs for a great many people in the United States.

We will be happy to explore with you the possibilities of opening up that sort of offshore construction. We have home porting, as you know, with one of the carriers.

Senator **Huddleston**. Let them spend some of the money they are taking out of this country every year and do themselves a favor and us, too.

Secretary **Weinberger**. It is tempting.

ATTENTION TO GUARD AND RESERVE

Senator **Huddleston**. From the standpoint of getting the biggest bang out of the buck in the readiness area, dollars spent for National Guard and Reserve offer a great opportunity.

I have been concerned for a long time that we slight our National Guard and Reserve. For a long time we were told this was a major component of our military situation and it had to be relied upon. But we seem to have a desire or mania, as some might call it, to procure sophisticated systems.

Are you confident that we are giving proper attention to the Guard and Reserve?

General **Vessey**. I am confident that we are giving a great deal more attention than we have in recent years, Senator. I, like you, agree that that is a very cost-effective way to add capability for our own Armed Forces.

All the services this year are providing modern equipment to their reserve components. We are expecting a great deal more from the National Guard and Reserve as a result of that. We are expecting extraordinary readiness.

Senator **Huddleston**. If we had a true national emergency, you would be calling on them pretty rapidly.

General **Vessey**. We would be calling on them to fight far more rapidly than they were ever called on before.

I will say one thing about neglect. Neglect is not because of the fact that the services wanted to slight the National Guard and Reserve. The fact of the matter was that we did not modernize any of the forces. The policy has been to give those forces that are most likely to face the enemy first the most modern equipment.

Today we see National Guard and Reserve outfits of all services getting very modern equipment, but not as much as I would like to see, I might add.

5-YEAR SHIPBUILDING PLAN

Senator **Huddleston**. On the 5-year shipbuilding plan if it is achieved—124 ships between 1984 and 1988—what are the personnel requirements and costs associated with this kind of buildup? Is that figured into your cost estimate?

Secretary **Weinberger**. Yes; it is because obviously we want to sail them and both the maintenance and operating costs are built in.

Because of the technology that people think is too complicated, or too sophisticated, we do have a much lower need for personnel on many of the newer ships.

Senator **Huddleston**. In numbers?

Secretary **Weinberger**. Yes; in numbers. We are getting the quality we need. That is one of the things I am most happy about in the whole personnel picture. The personnel cost, operating maintenance and repair costs and all the rest are realistically and honestly figured into the 5-year program that we have.

Senator **Huddleston**. I believe my time is up, Mr. Chairman.

Senator **Stevens**. Thank you very much, Senator.

I do have a couple more questions I want to ask. We are going to try to get the Secretary out of here by noon unless another Senator comes that wants to ask some questions. I have three that I think are sort of important, Mr. Secretary.

U.S. TROOP LEVELS IN EUROPE

One is, last year we did have considerable controversy over the troop levels in Europe. This subcommittee took a trip to Europe in December. We were warmly received by Chancellor Khol and discussed the matter at length with him and with our British counterparts in the Parliament in London.

As a result of that, when we came back we did reach an understanding with the administration and with the Department concerning troop levels. Now we can't tell from this budget whether or not that understanding is carried through, that there would be no troop level increase without a specific finding of the President that the troop level increases would be needed.

Does this budget reflect any increased troop level in Europe?

Secretary **Weinberger**. Let me put it this way. First of all, we will follow the intent and wishes of the Congress. If increases are ultimately thought to be essential, we would certainly request the required funding, because we would certainly want to have that funding accurately reflect the condition.

As you know, we are against the idea of ceilings. We think they reduce our flexibility and set a rather bad psychological tone throughout the whole alliance. We will meet the fiscal year 1983 ceiling on September 30. We are working with the European Command and Joint Chiefs and military departments to find the best way to try to do that.

For fiscal year 1984 we are reviewing the plans in light of the current ceiling. We may have to have some increases in the military strength in Europe to meet our NATO commitments, and improve our readiness, with the deployment of our missile systems.

As we get further into that, and it does require some increase, and we think it will, it will only be done with the consent of the committee on the basis of a Presidential finding that it is required.

Senator **Stevens**. We will include language in this bill, as in the last bill, to require some notification of change.

Secretary **Weinberger**. We hope to talk you out of using the same language because we think imposition of the ceiling reduces flexibility and gives an impression that is not accurate of U.S. future intentions.

Whatever is put in, obviously we will comply with. But it would be better, we think, from all points of view not to have a firm ceiling that works to reduce our flexibility.

BRITISH TROOP REDUCTIONS

Senator **Stevens**. Mr. Secretary, when we were in London, the British announced they were withdrawing 2,000 troops from their strength in Europe down to a level of 55,000 troops.

We are in a situation where we have increased our strength by almost 60,000 during a period that our allies have reduced theirs, if you count this 2,000 additional withdrawal by the British, about 58,000 troops.

We just cannot believe that we ought to move out ahead of our Eueopean counterparts. Again we are not talking about withdrawing troops. We are talking about trying to hold the line and not increase troop strength over there at a time when we are modernizing our capability substantially.

We made the point throughout Europe that our investment in modernization is overwhelmingly for the NATO forces. We cannot be expected to both increase the troop levels and modernize at the same time if our European counterparts are reducing their troop levels.

I do hope the Department will cooperate on that with us.

Secretary WEINBERGER. I could make some quick points in response to that, sir.

Senator STEVENS. Yes, sir.

[The information follows:]

TROOP STRENGTHS IN EUROPE

Department of Defense figures on changes in troop strengths in Europe show that U.S. forces ashore in Europe increased from 278,000 in 1975 to 323,000 by October 1982, a total increase of 45,000. For the same years, the total active military strength of European NATO allies rose from 3,039,000 to 3,257,000, an increase of 218,000. In terms of longer-range trends, European strength levels have remained nearly constant since 1964. During this same period our worldwide troop strength went from about 2.5 million in the early 1960's to a Viet Nam high of 3.2 million, before dropping to 2.0 million in 1979. Our troop strength in Europe (ashore and afloat) dropped from a high of over 400,000 in the early 1960's to a low of about 300,000 during the Viet Nam era. It is only in recent years that we started to correct the deficiencies that occurred during the years when competing demands resulted in a drawdown of military resources allocated to deterrence and defense in Europe.

Secretary WEINBERGER. The first point is that obviously we will cooperate with you in every way we can.

The second one is that we always bear in mind—and we think it is an important point to bear in mind—that we are not there just aiding the Europeans. We are there helping ourselves. We are prepositioning our troops in a forward defense position that is very advantageous to us should anything happen in the way of a war.

Another point is that if we forego these planned increases as required by a ceiling, we are doing it unilaterally. The imposition of the ceiling requires reductions of planned increases.

Senator STEVENS. That is only because you exceeded the estimate last year. You gave us an estimate at the end of the year and were in excess of that. We do not consider it withdrawal of troops if you have too many there over the amount budgeted for last year.

Secretary WEINBERGER. It does work out that way. The estimates are subject to changing conditions. We can make estimates 18 months ahead. We hope conditions will be the same. Things may intervene that will require changes during that period. However, I would like to provide an insert for the record to clarify the situation further.

[The information follows:]

European Troop Strengths

Our actual strength at the end of fiscal year 1982 did exceed our planned strength of 315,600 U.S. military personnel permanently stationed ashore in NATO European countries by about 7,400 people. However, the major reason for this difference is that the actual strength data reported on September 30, 1982 included about 6,900 people who are not permanently based in European NATO countries but are only over there on temporary duty—primarily for the REFORGER training exercise. The 500 people by which we exceeded our planned strength is not excessive considering it represents a deviation of less than two one thousandths of a percent of the planned strength.

U.S. TROOP INCREASES IN NATO

Senator STEVENS. You are a brilliant man and you know how to put into effect management controls. All we are asking you is that the number of troops in Europe do not exceed the budget approved by Congress. That is what happened here 3 years in a row.

People accuse us of trying to withdraw troops when we never intended to withdraw troops, we wanted to stabilize and make the Department of Defense live up to its own estimates of the number of troops that are going to be in Europe.

Secretary WEINBERGER. Stabilization is much easier to do if you are operating in a vacuum or without opposition that is not stabilized. That is the whole problem with the changing conditions and trying to impose a strict ceiling.

Senator STEVENS. If the President finds there is an overwhelming need in the interest of national security to increase troops, no one will argue.

The question is: Are we going to allow the management of the Department of Defense to continue to increase troop levels without any control?

Your budget last year showed how many were supposed to be there on September 30. According to the information we received from the Department, that was exceeded. The same thing happened the year before and the year before that.

Now we have said in law this year you cannot exceed your own estimate. I don't consider this to be mandating a withdrawal of troops if you live up to your own estimate.

We are going to put that back in, Mr. Secretary, and we will have a real fight on the floor over it. We cannot see the increase in cost. As you said, yourself, 60 percent of the costs here are manpower. That is a runaway manpower situation over there if we don't get it under control.

Our European allies thought we were withdrawing troops. Every meeting we had there was a great misunderstanding. "Why didn't you tell us that?"

As a matter of fact, I asked your British counterpart what he would do if he found out that there were several thousand troops in Europe in excess of what was supposed to be there. He said, "Funny thing, that is what we found out, we are withdrawing 2,000 troops."

No one though that was withdrawal. It was meeting their commitment of 55,000 troops. There were more than 55,000.

Secretary WEINBERGER. Senator, unfortunately we have used the word "withdrawal." Perhaps a better choice of words is "we will have to forgo planned military increases." Nevertheless, the numbers really have to depend on the military situation. We make the very best estimate we can. We certainly will comply with the requirements of the committee and reach the ceiling for fiscal year 1983 on September 30.

Again I simply say that it is difficult to operate in a situation of this kind as if you were in a vacuum without reference to the needs that are imposed by the conditions that you meet in Europe, unfortunately those conditions are not unchanging.

Senator STEVENS. Mr. Secretary, we went to Naples, we met with the Navy group. We understood their point. In a compromise we reached, we excluded naval forces afloat. We are talking about onshore troops in Central Europe. That is the problem.

When we talked to the Chancellor, I can't remember a meeting that more impressed the members or our committee than the meeting with Chancellor Khol and the dedication he has to the defense and maintenance of his country, the maintenance of NATO.

We met the objections they had. We literally tried to make everyone understand we are not saying we want to withdraw troops from Europe. We just don't want to see increases unless they are justified in the interest of our national security.

If we can keep to that, we have an understandable position. If you request it and the President makes the finding, I will be in the frontlines saying it has to be done.

Secretary WEINBERGER. We are not in disagreement at all.

Senator STEVENS. We are in disagreement because we can't get the figures from the Department as to what is in the budget for 1984. We don't know whether you are going to increase troops or not.

Secretary WEINBERGER. We have not yet reached the conclusion as to whether it will be necessary. If it should be, it will only be because of conditions that would justify a Presidential finding.

Senator STEVENS. If we are in agreement, we are in agreement. Until we learn to the contrary, we are going to assume that there is no increased troop strength in Europe until the President makes that finding. We worked it out, we tried to be fair with everybody concerned.

INCREASED JAPANESE DEFENSE ASSISTANCE IN PACIFIC AREA

I want to shift to Japan. Senator Huddleston was mentioning that Prime Minister Nakosone has put his own career on the line to indicate the need for the Japanese to recognize the problems of the defense of the Pacific.

Secretary WEINBERGER. He has indeed.

Senator STEVENS. I haven't seen anything come from the Department which indicates to us a definition of where the Department would like to see the Japanese increase their emphasis on their own defense.

Secretary WEINBERGER. We have gone into that in great detail with the Japanese. We will be glad to go over it with you.

The thing they need to do more to fulfill their own defense plan is for antisubmarine and antiair capabilities. They have a defense plan that requires that they defend their home island, defend the air and sea space around them and sealanes out to a thousand miles.

Senator STEVENS. That is what we don't know. Have you any indication that this commitment is going to be met?

Secretary WEINBERGER. It can only be met with increased resources by the Japanese and they know that we know it. We have gone over with them at their request and our joint commissions and others have indicated many times the additional things that would be required to do that.

We can certainly go over that with you. It is essentially to acquire an air defense and an antisubmarine capability of a greatly increased nature. That will then relieve many of our fleet units so that we can do other tasks that are vitally needed in the southern region.

MILITARY EXPENDITURES IN PACIFIC

Senator STEVENS. That comes down to dollar signs with us. This committee deals with dollar signs.

When will we see any change in the cost of our defense structure in that area if they are in fact doing it?

We have no indication they are doing it. Therefore, we are going to withstand any attempt of others to reduce expenditures in the Pacific. I don't see any proof this has happened yet.

Secretary WEINBERGER. The Japanese have made some steps toward increasing their military strength. They have not done, as we know and as they know, enough to reach the goals of their own plan. They will have to do more.

They are doing more than appears in their own defense budget, because they are expending resources for support of our forces that we would otherwise have to maintain the required presence in that area. They need to do more, and they know that.

It is in the basic area that I have outlined. It will not mean an automatic, immediate reduction in our own expenditures. What this means is that we will be able to far better do the job of guarding the sealanes of communication that are vital to them and to us.

Senator STEVENS. We are going to have to have something concrete. I think it is nice to have a plan whereby the Japanese protect a thousand miles out from their shoreline. That is a good agreement. Until they do, I assume we are keeping our Navy there; is that right?

Secretary WEINBERGER. We are indeed.

Senator STEVENS. And that is a substantial cost?

Secretary WEINBERGER. It is a cost, Senator, and the alternative to that cost is to look at an ever increasing Soviet presence in that whole area, both naval and air. As you know it has been going up dramatically. That is one of the reasons Prime Minister Nakosone is willing to call this danger to the attention of his country and his parliament. They do need to do more.

Senator STEVENS. Anchorage is closer to Tokyo than Washington, D.C. I am interested in what is going on in Japan. It is provincial when we ask what are you doing to assure that they are in fact going to perform under the agreement that they have made.

We have witnessed and applaud you for the movement of our aircraft carriers into the North Pacific, for the maneuvers that have been taking place in the Pacific to demonstrate our capability, but those vessels should be joined by some of the Japanese in order to carry out that plan as I understand it.

Secretary **Weinberger**. Yes, we agree fully. Again the problems of pushing these programs through one legislative body are difficult enough without trying to do it through the diet tool.

LEASE OF VESSELS AND AIRCRAFT

Senator **Stevens**. One last subject. That is the subject of leasing.

This committee has supported the concept of acquisition of new vessels, of new aircraft. Although we had disagreement with the type of aircraft, we supported fully the request for new aircraft for the Air Force.

I have been concerned with the evidence that is coming to the top of our pile here that there is a new policy in the Department of Defense to lease or charter vessels or aircraft in a way that really commits us to a different kind of budget mix.

When the Department charters a vessel or leases aircraft, it increases its annual operating budget. The O&M budget is being distorted now by charges that are coming in, expenses coming in, for leasing vessels and chartering vessels and aircraft.

For instance, I am told that in this budget there is a proposal to lease aircraft to be operated by civilian pilots to train our navigators in the Air Force.

Are you familiar with that?

Secretary **Weinberger**. Mr. Chairman, what we try to do is whenever we can find a more cost-effective way of performing a task, we believe we should follow it unless there is some overriding major objections.

As far as leasing certain types of naval supply ships or doing some training, if that can be done by a contract that doesn't require all of the supporting personnel costs and everything else, we will try to do that. On leasing of the ships alone, two ships, there is a net saving to the Government of $28.4 million.

Senator **Stevens**. Only if you don't buy them.

Secretary **Weinberger**. Yes.

Senator **Stevens**. We understand there is some plan where you will buy them after you rent them for a few years. That is the problem we got into with the Post Office with the plan they had of leasing post offices, and you remember that, you were over in OMB when we had to straighten that out. Now you are wearing another cap.

I want you to know this one is bigger, much bigger.

Incidentally, we are not opposed to it. We don't know why we have to acquire new vessels with construction money if you are going to lease the same kind of vessels and augment the force so that in the same force we have leased vessels and newly purchased vessels.

Secretary **Weinberger**. The lease proposal is only used in situations where a complete financial analysis shows that it is a better, more cost-effective way of proceeding.

TAK-X SHIPS

The two TAK-X ships I have indicated will produce that saving of $28.4 million. We are not planning to apply it to combat ships or combat aircraft or anything of that kind. You can run wild with this leasing program.

We had an analyst at OMB who wanted to lease the Capitol. You don't use this all the way.

Senator **Stevens**. Senator Rudman wants to ask a question.

From my point of view, analyzing the budget, if you use leasing, and I defend it in one way, on the one hand it creates a loss in terms of tax revenues because those vessels are going to be amortized whereas the vessels that you procure will not be.

On the other hand, you don't have to borrow the money, so you don't pay interest.

Also, we don't have this horrendous 60 percent over the base salary of the people who are operating it if you are going to let civilian pilots fly those navigators. Again I don't think anyone has analyzed it because if you take it in the final analysis, maybe we ought to go to the private sector for a lot more of our military.

Secretary **Weinberger**. We are looking at all the possible ways of saving money, Mr. Chairman. Let me give you quickly the analysis on these new TAK-X ships. The actual savings to the Navy is $35.2 million for chartering rather than purchasing.

There is impact on the Treasury, a net Treasury outflow of $6.8 million. The net savings to the Government is $28.4 million. That is with a very careful analysis in this case.

Also, we can get them very quickly and that helps a great deal.

LEASE AND CHARTER PROBLEMS

Senator **Stevens**. We don't know anything about this until we get the O&M increase. This committee won't see any of these expenditures until you start paying the charter fees. I tried to hold this up so that we could get an analysis of it and the Navy ran off with it.

We decided not to make a rhubarb out of that because it was at the end of the last session. We are entitled to review this because you are going to end up with a whole fleet of commercial vessels. I think we are with you, but we ought to have some advanced knowledge of what it is going to do to the budget downstream.

Mr. Secretary, you will lose ships this year from people who have already told us you are doing this and those ships will be counted in the 600 and you are going to lose aircraft if people think you are going to acquire them on a charter basis instead of buying them.

We have been approached by two Senators who want the companies in the States to be building aircraft for charter instead of having them built in another State for purchase. This is going to tear the fabric of the Congress unless you get a firm policy of where we are going with regard to lease and charter.

I see it as a larger problem than the Post Office problem and I lived through that with your people in OMB.

Secretary **Weinberger**. There is no question about our willingness to show you all the analysis and show you how the operation and maintenance during the period of the charter is included because we have to do that.

We will go over it in detail with you. Sometimes it is a better way to go.

Senator **Stevens**. Maybe it is a better way to go all the time.

Secretary **Weinberger**. Well, our analyses indicate that some are and some aren't.

Senator **Rudman**. The Secretary answered the question I was going to ask. I expect we will get an analysis that will show each of the costs because obviously that is something we want to see.

Secretary **Weinberger**. We have used it sparingly. There is no advantage to advance it in an area where it won't work or produce real savings.

Senator **Stevens**. I would rather see the Navy lease these vessels and have them operated and have them available, if possible, even for part-time charter in the private sector to meet some of the needs there if they are not going to be fully used by the Navy.

We are jamming our shipbuilding facilities up to the mark as far as large vessels are concerned. I do hope it is totally analyzed as to how these will fit into the civilian sector and the same thing will the aircraft flying navigators.

What will navigators do when they are not flying? Will they sit on the line and not be used?

Secretary **Weinberger**. The charter and the whole arrangement is always based on the most effective and economical use of them. If they are indeed not needed or we don't have situations of that kind now, that will not be time for which the Government will be charged.

These are experimental kinds of things that we are trying to do to save money. When the analysis is clear, and we have no doubt, we will proceed that way, we will notify the committee and be glad to show you the analysis.

Senator **Stevens**. We will be glad to see that.

SUBMITTED QUESTIONS

There are some members of the committee who indicated they would like to submit questions.

I again apologize to Senator Kasten. Because of a situation that developed, he had to go back to the Budget Committee where they are working on the budget resolution now.

Senators Stennis, Proxmire, and Andrews indicated they will submit questions for the record.

Mr. Secretary and General, we appreciate your cooperation with our committee. You are very patient with all of us. We thank you for your courtesy.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

Budget Priorities

QUESTION: The Committee is aware of all the proposals being advanced for reducing the Defense budget, either by some arbitrary dollar figure or by limiting real growth to a percentage something less than the 10 percent you propose.

It would help this Committee, I believe, if you could assess in a general way the impact of these various reduction proposals.

Can you and General Vessey do that for us? What would be the impact if military spending were held to a real growth level of 7 percent or 5 percent or 3 percent?

ANSWER: The establishment of defense budgetary levels based on arbitrarily prescribed real growth percentages would result in major reductions in the President's program for revitalizing this nation's defense capabilities.

Such reductions would result in eliminating program increases in a number of readiness areas, such as steaming and flying hours and the number of effective training days. Backlogs of depot maintenance would increase thus reducing the availability of needed systems and equipment for the forces in the field. Real property maintenance backlogs would increase, offsetting the recent progress made in improving the condition of operational and personnel support facilities needed in day-to-day operations. Budget increases to insure the availability of spare parts in the field would have to be moderated or eliminated. Logistics support programs, which provide technical support to the operating forces, would have to be curtailed.

Larger reductions would require absolute reductions in current levels of operation. Without real growth in the operating accounts, it would be necessary to cut back on the level of operations (and therefore readiness) for the increased number of ships, aircraft, tanks, and other systems. A further consequence would be to limit seriously the availability of spare parts, ammunition and other support items for any future emergencies.

Reductions in the operating accounts would soon require reductions in the force levels themselves. If the resources required to support planned force levels at effective levels of readiness are not available, reductions must be made in either the size of the force or in its readiness to accomplish the mission. Therefore, units would have to be identified for deactivation or they would have to be explicitly identified for reduction in their readiness classification.

Interrelated with reductions in readiness, sustainability and force levels would be the requirement to cut back the modernization/investment area by several billion dollars. For example, the increases for multiyear procurement, vehicles, support and communications ($4.8 billion in TOA) may have to be adjusted. While this could generate approximately $700 million in FY 1984 outlay reductions, $2.8 billion in savings would be lost in the multiyear procurement reductions alone. Also, this would surely signal to the private sector our lack of will in revitalizing the defense industrial base by creating more efficient investment opportunities and incentives at a most critical juncture.

In addition, the rate of modernization of our weapon systems would be slowed. A $3.0 billion TOA reduction in this area would generate approximately $400 million in FY 1984 outlay reductions. In return, we would retain less capable aircraft, missiles, ships, etc., in the force for an extended length of time. Production lines would be operated at lower and less efficient rates. Also, if procurement growth were significantly reduced, all increases for readiness and sustainability and for our strategic initiatives would be deleted.

Defense as Percentage of GNP

QUESTION: Defense spending as a share of the gross national product is climbing steadily from the low point of the late 1970's. It is going from 6.7 percent this year to 7.9 percent by 1988. That compares to an average of 5.8 percent for the preceding five years. What, in your judgment, is a realistic military share of the total economy?

QUESTION: It would be nice if we could justify our budget request in a simple manner such as a fixed percentage of GNP. However, this is not the case because, in some years, a very large percentage of GNP may not be adequate to provide the necessary defense for this country. We have prepared our budget request based on an evaluation of the threat we face, and our future requests will be done the same way.

Budget Adequacy

QUESTION: Mr. Secretary, do you believe the 1984 budget before us provides an adequate allowance for inflation? Recognizing past and current inflationary trends in defense purchases, are the projections in this budget realistic?

ANSWER: Yes. We believe that our budget is priced with realistic estimates of inflation, particularly in view of the recent declines in other Macro economic indications such as the CPI.

QUESTION: What about cost growth, Mr. Secretary? The Department does not have a good record over the years of budgeting realistically for cost growth. Is this budget any better?

ANSWER: While we cannot absolutely guarantee our projections, we feel that this budget is much more realistic than those of prior years.

QUESTION: I presume you are familiar with the Air Force report called, "Affordable Acquisition Approach." A thrust of that report is that the military must budget more realistically for cost growth or face the need to cancel some weapons programs and sharply reduce new starts. How do you assess that report?

Answer: That report is an interesting and accurate appraisal of the cost growth and affordability problems that have beset DoD acquisition programs in the past. The historical record is rather clear that such problems have existed for some time. This Administration has taken, within the first two years of its tenure, steps to deal with these problems on a systematic and decisive basis. I believe that our management initiatives in the acquisition area have significantly improved the historical situation the report describes. As a result of our budget to most likely cost initiative our program is more accurately priced than previously was the case. Following our program stability initiative we have controlled stretching production rates during the annual program and budget reviews. (That is one of the major phenomena that the A^3 report identifies as having led to decreased buy quantities and increased costs in the past.) In fact, in every case possible, within fiscal constraints, we have opted for more economic production rates. So far during my tenure, we have not suffered significantly from Congressional action that stretches programs--another phenomenon the report identifies as having affected cost and buy quantities in the past. However, if some of the reductions to the FY 84 DoD budget I have heard discussed are enacted, defense programs will undoubtedly be adversely affected as in the past. That in my view would be most unfortunate and would reverse the significant cost reducing management improvements we have brought to the acquisition process.

Question: Do you think your defense acquisition improvement program will really be able to control cost growth? Do you think an annual 2 percent cost growth is achievable?

Answer: The DoD goal is zero cost growth. Achievement of this target is dependent on the accuracy of our economic assumptions, cost estimating procedures, implementation of new contracting instruments and the success of the "Carlucci Initiatives."

The causes of the past cost overruns were analyzed in detail which resulted in the management initiatives instituted by this administration. If properly instituted, the magnatude of the cost experienced in the past will be substantially curtailed.

1983 Supplemental

QUESTION: What about that 1983 supplemental, Mr. Secretary? When are we going to get it and what will be in it?

ANSWER: The details and justification are being worked on and will be sent to OMB for approval and Presidential transmittal to Congress.

QUESTION: The Appropriations Committee must report to the Budget Committee by March 1 its estimates and recommendations on federal spending for fiscal year 1984. It will be difficult for the Defense Subcommittee to come up with sound estimates if it does not have the details on the proposed supplemental. When will that information be available?

ANSWER: The President will be submitting a portion of our supplemental to Congress shortly.

QUESTION: I hope the supplemental will be a realistic one and recognize that Congress is not likely to reverse too many decisions it made only two months ago. Are you considering that problem?

ANSWER: The initiatives in our package are considered critical, not only to our NATO commitments, but also to our overall national security.

QUESTION: We have heard a lot of talk about some kind of rescission proposal being prepared by the Department. Every day, it seems, there is a different list of proposed rescissions. Where does that stand now?

ANSWER: The details of the proposed rescissions have not been finalized at this time.

Strategic Forces

QUESTION: By far the greatest budget emphasis continues to be on strategic forces, Mr. Secretary. That is where the biggest dollar increase lies, but we are also told how important it is to expand and modernize our conventional forces. In your judgment, which has the greatest priority?

ANSWER: The budget before you represents my best judgment of the proper balance between strategic and conventional forces. The significant steps that must and are being taken to modernize our strategic forces are not being taken at the expense of needed conventional modernization. In fact, the direct cost of strategic modernization, along with the cost of operating our current strategic forces, amounts to less than fifteen percent of the total DoD budget. This percentage will be even lower toward the end of the five year planning period as our strategic modernization initiatives are realized.

President's Commission on Strategic Forces

QUESTION: The most expensive piece of our strategic modernization program is the MX missile, over which Congress and the Administration find it difficult to agree. Is there any chance the President's Commission on Strategic Forces will come up with more affordable alternatives?

ANSWER: The President's Commission has spent considerable time evaluating the many proposals that various groups or individuals have recommended as basing modes for the Peacekeeper missile. As requested by the Congress, they are also evaluating other sizes of missiles and certain alternatives to Land Based ICBMs. It is not productive for the DoD to speculate about the costs of the Commission's potential recommendations at this time.

Commission's Recommendations to Congress

QUESTION: What is the best guess now on when this commission will deliver its recommendations to Congress?

ANSWER: The President's Commission must first report its findings and recommendations to the President. After that, of course, the report will be forwarded to the Congress. At the present time, there is no specific target date for submission of the Administration's Report to Congress.

Small, Mobile Missile

QUESTION: How serious is all this talk about a smaller, mobile missile? How would that kind of alternative affect your pending budget estimates for both 1983 and 1984?

ANSWER: Since we are not authorized to speak for the President's Commission, it is not appropriate for us to comment or speculate on what is or is not happening. Certainly, however, any change in the Peacekeeper Closely Spaced Basing program that is the basis for our FY 1983 and 1984 budgets would necessitate changes to those requests.

Peacekeeper and FY 1984 Budget

QUESTION: We are heading into a difficult timing problem with MX. We on the Appropriations Committee are being asked to report a 1984 appropriations bill by mid-June. Meanwhile, Congress must await the Commission recommendation and then pass a special resolution before anything substantial can be done about a new land-based ICBM program. How do you see all this working out?

ANSWER: We share the concern evident in your question, but we believe the first imperative is to define the land-based ICBM modernization program this country needs. We should take whatever time that requires and then begin its implementation as soon as possible with the assistance of the Congress.

Pershing

QUESTION: Mr. Secretary, Congress deferred production funding of the Pershing II missile until the Army could come up with more successful flight testing. You plan to send us a supplemental request for that production funding soon. Do you fully anticipate this new system will indeed be ready for production so soon?

ANSWER: The system is, in fact, in full production now and has been since June 1982. The test program to date has demonstrated the readiness of the system for production. The Pershing II system had already undergone extensive testing prior to the initiation of the flight test program. The results of testing conducted to date have been very good and we see nothing on the horizon that would lead us to believe any significant changes will have to be incorporated into production hardware prior to the Initial Operational Capability. The short and long range capabilities of the system have been demonstrated and we will soon demonstrate the system accuracy. The last two flight tests (both successful and without deficiencies) have significantly increased the confidence that the design is sound. The real critical path that we see at this time is establishing the system accuracy in the next test. Once we have done that, the testing that remains to be done is essentially confidence-building in nature.

QUESTION: What would be the program impact if production funding for Pershing II were delayed until fiscal year 1984?

ANSWER: The fiscal years 1982 and 1983 production programs are underway now. Fiscal year 1982 output will be used to achieve the Initial Operational Capability. While fiscal 1983 production is underway, the Army will not continue this production beyond 15 May, however, without supplemental fiscal year 1983 funding. If supplemental funds are not provided and fiscal year 1983 production is terminated, the impact on the Pershing II program would be:

- $150 million fiscal year 1983 liability cost with little program benefit. Additionally, the magnitude of this bill this late in the fiscal year would have significant adverse impact on a number of other Army programs/accounts from which resources would be reprogramed.
- Approximately 16-month gap in missile production line (assumes fiscal year 1983 program).
- An inefficient deployment program which would cause considerable delay (approximately 12-18 months) between initial and subsequent deployments and delay phase-out of Pershing Ia System.
- Increased total cost of Pershing II production program (approximately $350 million).

- A signal to the Soviet Union of weakening of the United States resolve to carry out our Theater Nuclear Force modernization commitments.

QUESTION: Are you fully confident that Pershing II development and testing will be successfully completed in time to support 1984 production funding?

ANSWER: Yes. In fact the system testing has already demonstrated the soundness of our decision to begin production in fiscal year 1982.

QUESTION: Do you really think we can handle all our existing commitments? Do we have that capability now?

ANSWER: We are obligated and honor-bound to fulfill all our commitments. We do have the capacity now to meet our commitments through a defensive strategy which seeks to deter conflict by stressing collective defense, forward deployments, and flexible force structure--but the risk of doing so successfully is high, especially if we are pressed to respond militarily in several areas simultaneously.

Our collective defense posture incorporates the strength of our allies. The North Atlantic Treaty, the Rio Treaty, the ANZUS Treaty, as well as our treaties with Korea, the Philippines, and Japan help provide for an effective common defense against external aggression.

By maintaining forward deployments that, combined with the forces of our allies, provide the first line of conventional defense in Western Europe, Japan, and Korea, we buttress our collective security posture. In the event of war, we plan to reinforce these forward-deployed units, using forces capable of rapid deployment over long distances.

We also seek a flexible force structure that builds upon our alliance commitments and associated forward deployments and provides us a variety of options with which to respond in a timely fashion to unforeseen contingencies in any region in which we have vital interests to defend.

In order to reduce the magnitude of risk involved in honoring our commitments and restoring peace on favorable terms should deterrence fail, we have undertaken several initiatives intended to improve our flexibility, readiness and mobility--our ability to respond. Among them are the purchase and stationing of equipment both in Europe and aboard ships at Diego Garcia in the Indian Ocean, creation of the U.S. Central Command which is earmarked to respond to crises in Southwest Asia; contracting for sorely needed improvement in our strategic air, naval and amphibious lift; and increasing our efforts to recruit and retain the high quality, skilled people required to man and maintain the weapon and support systems necessary to create a credible deterrent.

Funding of the programs we have requested will allow us both to greatly enhance the probability of success should we ever need to deploy forces for combat and greatly reduce the element of risk our forces would face. Collaterally, and of equal importance, it will measurably improve the credibility of our strategy of deterrence and reduce the probability of conflict.

QUESTION: We talk constantly about burden sharing but see little substantial change in the defense contributions of our allies. What are we doing now to exhort more participation from our friends abroad?

ANSWER: The Secretary of Defense and other high level Defense, as well as State Department official, use every opportunity to encourage our allies to assume a more equitable defense burden. In NATO for instance, this is a major agenda item for discussion both with visiting senior government officials from NATO countries and when our officials visit NATO countries. In addition, this subject receives continual attention in bilateral and multilateral contacts at NATO ministerial level and other NATO meetings. Examples of more formal negotiations currently taking place that impact burdensharing are the Master Restationing Plan with Germany and Collocated Operating Base agreements with various nations.

Similarly, the Reagan Administration regularly addresses with Japan the question of sharing roles and missions. As a result of this dialogue, in May 1981 the Japanese Prime Minister for the first time formally committed Japan to a division of labor in defense with the United States (Reagan-Suzuki Joint Communique). On his own initiative, Prime Minister Suzuki declared that Japan's national policy is to defend its own territory, its surrounding seas and skies, and its sea-lanes to a distance of 1,000 miles. The United States is encouraging the GOJ to accomplish its policy goals by 1990.

JAPAN'S DEFENSE CAPABILITY

QUESTION: IS JAPAN ANY MORE CAPABLE NOW OF DEFENDING ITS OWN SEA LANES 1,000 MILES OUT THAN IT WAS TWO YEARS AGO? IF SO, IN WHAT WAY?

ANSWER: JAPAN'S MARITIME AND AIR DEFENSE CAPABILITIES CONTINUE TO GROW YEAR BY YEAR, BUT THE REQUISITE FUNDING TO PROCURE ADEQUATE SEA-LANE DEFENSE PROTECTION HAS NOT YET BEEN ALLOCATED. AT PRESENT JAPAN WOULD BE VERY HARD PRESSED IF ITS SEA-LANES WERE CHALLENGED, EVEN WITHIN 1000 MILES.

BURDENSHARING

QUESTION:

Is there any solid indication of more defense spending on the part of our European allies? Isn't the trend in the opposite direction?

ANSWER:

The combined defense expenditures of our NATO allies have increased every year since 1970 and the real increases for the decade of the 70's averaged over 2.0% annually while the US declined an average of 0.7% annually. For the last two years for which we have firm data (1980 and 1981) our NATO allies had increases of 2.7% annually approaching the NATO aim of 3%. Our estimates for 1982 and forecast for 1983 indicate our allies in aggregate will continue to show read increases in defense expenditures although we are concerned that these increases are estimated to decline to about 1.0 to 1.6% and 0.7% to 1.0% in 1983. US increases for 1982 and 1983 by comparison, are estimated at 7.5% for 1982 and 10.3% for 1983.

DoD Leasing Policy

Question: This Committee remains concerned over the rapidly expanding practice of leasing ships and aircraft on a long term basis. This serves to shift the cost from the Procurement account to Operations and Maintenance. Where does the Department stand on this practice? Have you established any controls or guidelines?

Answer: It would not be accurate to say that there is a rapidly expanding practice in the Defense Department to utilize chartering or leasing as a means of acquiring ships and aircraft, as well as other equipment. Goods and services needed by the Department of Defense to carry out its mission can be acquired by either purchase or by lease. Under either alternative, we can operate and maintain the items of equipment ourselves by utilizing government personnel or we can buy the services to do so. In addition to these two methods, we can acquire services from the private sector that involve the incidental use of real or personal property. The government neither buys or leases the property in these cases. Leasing has been used traditionally in the Department for real property, data processing, and other office equipment, and transportation. Policies are in being in the Department of Defense to ensure that only cost effective alternatives for acquiring property and services are employed. For example, any contract for services that would involve the long term leases of such hardware as ships would require deviations from the Defense Acquisition Regulation required clauses. These deviations must be approved by the Deputy Under Secretary of Defense (Research and Engineering), Acquisition Management.

Advance Congressional Review of Leasing

Question: Leasing or chartering bypasses the normal Appropriations review. Congress often does not learn about a leasing venture until after the commitment is made. What are you doing to assure adequate review and approval in advance by Congress?

Answer: The acquisition of goods or services involving long term leases require the notification of the Armed Services and Appropriations Committees. In the recent case of the Navy's TAKX ships, te congressional review included a study by the House Appropriations Committee Surveys and Investigations staff.

Criteria for Leasing

Question: What are the criteria governing the option to use leases or charters for ships and aircraft?

Answer: The decision of which acquisition method (purchase, lease, or service contract) is employed to satisfy a need must be made on a case-by-case basis. Criteria for weighing the alternatives include cost to the government, duration of the requirement, the probability of equipment becoming obsolete and having to be replaced with newer equipment, and whether the equipment involved is of such a nature that it is not in the government's interest to operate and maintain it with in-house personnel resources.

Cost Analysis of Leasing

Question: Some critics maintain leasing is more costly when considering the loss of tax revenues involved in that practice. They also charge that leasing is a device to shift part of the defense burden to tax expenditures. Have you examined this problem from that point of view? What are you conclusions?

Answer: The recent congressional testimony presented by the Department of Defense included specific instances of how and where the potential loss of tax revenues from depreciation of ships and aircraft was considered or was planned to be considered in decisions on whether to purchase equipment, lease equipment, or acquire a service involving the use of equipment by firms in the commercial sector. The Department has analyzed the assertion that lease options may be as expensive, if not more expensive, to the government than direct purchase. Much depends on the specific circumstances surrounding a particular lease vs. purchase decision. Therefore, it is the Department's policy to consider these decisions on a case-by-case basis. While in some cases the cost of purchase is about the same as the cost of leasing, there are considerations in addition to the cost to the government, such as the urgency of the need. The Department has examined, and is continuing to analyze, this issue.

Program Cancellations

Question: Mr. Secretary, in your Annual Report you state that lower priority programs must be canceled to provide funding stability for the highest priority programs. Which low priority programs were canceled in the FY 1984 budget review?

Answer: The following lower priority programs were canceled during preparation of the FY 1984 budget:

New Fire Control for Atomic Munitions
Armored Forward Area Rearm Vehicle
Improved Message Facility (MTCC)
TRI-TAC Multi-Subscriber Equipment
TRI-TAC Modular Tactical Communications Equipment
Army Winch Vehicles
Stores Management System for NATO
Modular Avionics Improvement
Missile Warhead and Fuze Technology
ASW Information Management System
TARTAR/Terrier Anti-Ship Missile Improvements
Passive Doppler Tracking
Lightweight Undersea Surveillance Sensors
Expeditionary Main Hanger
JTIDS Weapons Control System
Advanced VFR/IFR Display System
Improved Traffic Control System
MODUL Glide Weapon Improvements
Propulsive Lift Device
Ship Combat Systems Management
Titanium 100 Technology
Advanced Air-to-Air Missile
Information Handling System
Avionics Fiber Optics System
Aircraft Propulsion Technology
Dynamic Submarine System Simulator
Digital Radar--Target Simulator
Stratified Charge Rotary Combination Engine
Anti-Sweep Anti-Hunt Mine Counter-Countermeasures
Submarine TOMAHAWK Support Equipment (VLS)
DDG-2 AAW Modernization
Advanced Sensor Demonstration
Terminal Guided Projectile (8-inch)
Indirect Fire Training Munition
25mm Ammo Improvements

Question: Which programs were stretched out so that other programs did not have to be cancelled?

Answer: The following major weapon systems were stretched due to financial constraints:

Patriot Missile
A-6E
F-14

F-18
SH-2F
AIM-9 SIDEWINDER
HARPOON
Laser MAVERICK
CAPTOR Mine
TOW Missile
STINGER
F-15

OUTLAY RATES

QUESTION: Over the last few years the outlay rate for the larger operating accounts has declined from about 82 percent to roughly 75 percent. what factors have caused this trend?

ANSWER: An analysis reveals that an increasing portion of the annual operating accounts has been devoted to rentals, contractual services and the purchase of materials and minor items of equipment. The portion devoted to pay and benefits for personnel has remained relatively constant. The latter type of cost is paid-out immediately with very little carryover. However, outlays or actual payments to contractors and suppliers are dependent on the completion of services or the delivery of material. There is a considerable carryover after the end of the fiscal year in which such contracts and purchases are obligated. There is also some administrative lag between certification of the receipt of services and goods until the actual cash disbursement (or outlay) is made in the form of a U.S. Treasury check. Also, cash management practices indicate that payments should not be made immediately on presentation of invoices. The government, as any business practicing good cash management procedures, does not pay immediately upon presentation of the bills but times the payment to be made just prior to the expiration of the discount period. This avoids the interest expense to the Treasury of borrowing funds to pay bills which are not yet due.

QUESTION: At a time when Defense outlays are increasing due to prior year commitments, do you find it disturbing that the annual accounts outlay at lower rates?

ANSWER: Since the analysis of this moderate decline in outlay rates indicates that it is due to the increased proportion of contractual services and purchases of supplies and materials, the Department is not disturbed by this change.

QUESTIONS SUBMITTED BY SENATOR ANDREWS

Defense Reduction

QUESTION: It's interesting to note that your FY 1984 Defense Budget request of $245.3 billion (outlays) is the same as the entire federal budget in 1973. The defense budget can be interpreted as either a reduction or an increase depending on what is considered current policy. This budget is a reduction from the Administration's 1982 projection for 1984, but an increase over the 1984 targets in the First Concurrent Resolution on the Budget for FY 1983. It appears that the defense budget substitutes reductions in pay raises, COLAs and inflation assumptions implicit in the budget resolution. Isn't the $11 billion in savings you are offering (BA) ($8.4 billion outlays) the result of repricing the pay raise, lower COLAs, and lower inflation assumptions? The Budget Resolution reduced the defense budget authority request by $13 billion for FY 1984. Isn't this $11 billion just a restoration of $2 billion of the $13 billion targeted for reduction by the Congress in 1984?

ANSWER: The reduction of $11 billion in BA consists of $1.0 billion for lower fuel prices, $3.5 billion for inflation savings, $4.9 billion for pay and related savings, and $1.9 billion for program reductions. When these reductions were taken, our FY 1984 BA request was $273.4 billion as compared to the budget resolution figure of $273.2 billion.

QUESTION. It is reported that all of your Joint Chiefs of Staff were not really consulted on the decision to reduce the budget by $11.3 billion and that they would have preferred to cut back additional programs and procurement and to keep the planned 7.6% pay raise. How much were they consulted on this?

ANSWER. The President and the Secretary of Defense were both aware of the views of the Joint Chiefs of Staff and myself on the pay freeze before the President made the decision to approve the pay freeze.

JCS Reform Proposals

QUESTION:

In light of criticisms that the Joint Chiefs of Staff lack enough real power to carry out their responsibilities, what is the current status of JCS reform proposals?

ANSWER:

The Administration is currently considering draft legislation on this subject. It will probably be submitted to Congress in the near future. The Chiefs have not proposed and the Administration is not now considering any major reforms in the statutes establishing the Joint Chiefs of Staff because the existing provisions of chapter 5 of title 10, United States Code, are believed to provide for a structure that is generally satisfactory. Within the framework of existing statutes the Joint Chiefs have proposed some significant changes in the manner in which they carry out the duties already assigned to them. These changes do not require legislative action.

Defense Overview

Senator Andrews: Your weapons research account shows a real growth of 24%; your procurement account's real increase is 9%. A recent Air Force report entitled "Affordable Acquisition Approach" states that without any congressional budget cuts, the Administration's 5 year proposal for weapons purchases is underfunded and greatly underestimates likely costs in the future. It suggests canceling some weapons programs and restraining new starts to save money for high priority weapons. It lists several weapons systems in order or priority to be cancelled. If you have seen this report, will you concur with these recommendations if Congress is unwilling to cut defense outlays by anything less than $15 billion?

Answer: I am aware of the "Affordable Acquisition Approach (A^3)" report. However, I still believe our five year program is realistically priced, and we will not have to cut back on that program to accommodate cost growth. If presently proposed Congressional reductions to the FY 84 DoD budget are enacted, I will be compelled to consider the priorities appearing in the A^3 report as well as others expressed by the Services and OSD in restructuring our program. That program has been prepared after intensive review throughout the Department. I am still convinced its enactment is essential for national security.

ESTIMATED EXPENDITURES FY84 - NORTH DAKOTA

QUESTION: In the DOD publication entitled "Estimated Expenditures for States and Selected Areas, FY 84", I note that North Dakota is one of the few states where no expenditures are indicated for research, development test and evaluation. With two SAC bases, two Minuteman Missile Wings and one operating component of a now defunct ABM system, are there no RDT&E funds required for the entire state? Could you provide more information on this?

ANSWER: There are several reasons why the Department of the Air Force, which has over 85% of the estimated expenditures for North Dakota in the FY 1984 report, has not estimated any RDT&E expenditures for the state. SAC bases and Minuteman Wings are not RDT&E funded activities. Funds for the support of these activities in North Dakota come primarily from appropriations for military personnel and for operation and maintenance and are indicated in the FY 1984 report under the categories of military pay, civilian pay, and operations and maintenance. Additionally, in the estimated expenditures report, the Air Force excludes the acquisition portion of all Air Force appropriations since the place of performance cannot be determined in advance. This includes the acquisition portion of RDT&E funds. In FY 1982, actual RDT&E procurement for all services in North Dakota totalled less than $1 million.

LEBANON LESSONS LEARNED

QUESTION: Is there any other information that we could obtain about the fighting that would be of value to the Unites States?
ANSWER: [Deleted].

LEBANON LESSONS LEARNED

QUESTION: Is it not true that the information provided by Israel about the 1973 Arab-Israeli War was of great importance to the US, and that information on the 1982 Lebanon War could be of equal significance.
ANSWER: While information on the 1973 Arab-Israeli War was important to the US, information on the 1982 Lebanon War is not of equal significance. [Deleted].

Guard and Reserve Equipment

QUESTION: In the FY 84 Defense Budget, $500 million is for Guard and Reserve equipment, according to previous testimony. Can you provide the figures for the respective Guard and Reserve units; i.e., Air, Army, Navy Reserve and National Guard?
ANSWER: In FY 1984 the Department has $1.663 billion for Guard and Reserve equipment. A breakdown by Service follows. All figures are from the Five Year Defense Plan except for Army which was provided by the Service.

Army National Guard and Reserve	$900.0 Million
Naval Reserve	211.3 Million
Marine Corps Reserve	45.6 Million
Air Force National Guard and Reserve	505.8 Million
Total FY 1984 Guard and Reserve Procurement	$1,662.7 Million

Guard and Reserve Equipment

Question: What airplanes and ships are destined for the Guard and Reserves?
Answer: The only ships projected for delivery during FY 84 are 3 FFG Frigates to the Naval Reserve. The following aircraft are scheduled for delivery:

Naval/Reserve	Number
ACFT-SH-2F (ASW Helo)	12
ACFT-E-2C (Early Warning)	4
Air National Guard	
ACFT-Strat. Tanker, KC-135E (JT3D Mod)	8
ACFT-Strat. Tanker, KC-135R (CFM- 56)	4
ACFT-Interceptor, F-4C	4
ACFT-Interceptor, F-4D	33
ACFT-TAC Fighter, F-4D	20
ACFT-TAC Fighter, F-4E	24
ACFT-TAC Fighter, F-16A	6
Air Force Reserve	
ACFT-TAC Fighter, A-10A	6
ACFT-TAC Fighter, F-4D	18
ACFT-TAC Fighter, F-16A	16
ACFT-TAC Fighter, F-16B	2

Source: FY 1984 Force Readiness Report (FRR)

Question : This year we're supposed to have the first delivery of new F-16 fighters to the South Carolina Air National Guard. This is the only state getting the new planes. The 119th Fighter Interceptor Group in Fargo is still using early model F-4's. What is the timetable for getting F-16's and F-15's to Air Guard squadrons?

Answer: The time table for placing F-16's and F-15's in the Air National Guard inventory is as follows:

- Air Defense Mission:
  . F-16's and F-15's will replace F-106's and F-4's during late '80's and early '90's
- Tactical Mission:
  . First F-16's scheduled during FY '83
  . Additional F-16's and F-15's are programmed for the late '80's and early '90's to replace the older F-4 aircraft.

Question: I was pleased to see that Secretary Weinberger, in a June memorandum to the Secretaries of the Army, Navy, Air Force and the Chairman, JCS, re-emphasized DOD Directive 1225.6 that units that fight first shall be equipped first regardless of component. The order requires that equipment inventory reporting systems identify obsolete as well as quantitative shortages in Guard and Reserve equipment; that the Services evaluate the progress of Guard and Reserve equipment fill; present a plan to correct deficiencies; and evaluate to what degree the respective Services are meeting the annual program. Will you advise us of the progress that has been made, to date, to implement these directives?

Answer: A primary vehicle for establishing an audit of the Secretary's directive is the annual report on Guard and Reserve equipment which was directed by P.L. 97-86, the 1982 DoD Authorization Act. Although only in its second iteration, the report submitted to the Congress on 15 February 1983 identifies quantitative shortages of major items of equipment in the Guard and Reserve as well as the plan which the Services intend to follow through FY 86 for alleviating these shortages. Subsequent editions of the report will trace the progress with which the Services are meeting their plans. To a degree, aging equipment is also evident in the annual report but a determination of obsolescence as well as the other factors of substitutability and nondeployability require an item-by-item continuing review.

QUESTION: There have been at least 30 different proposals suggested for the MX basing system. Do you really expect the Presidential Panel on MX to come up with anything new?

ANSWER: The President's Commission has spent considerable time evaluating the many proposals that various groups or individuals have recommended as basing modes for the Peacekeeper missile. As requested by the Congress, they are also evaluating other sizes of missiles and certain alternatives to Land Based ICBMs. It is not productive for the DoD to speculate at this time whether or not the Commission will recommend a new idea.

FMS Guaranty Credit Program

QUESTION: The Foreign Military Sales (FMS) guaranteed loan program has financed billions to many countries facing severe economic problems. GAO reports the Treasury Department does not report its disbursements in the budget because it expects to be repaid with full interest. Some countries have great difficulty meeting the required interest payments. Foreign military aid is a relatively small portion of the overall defense budget. What is your opinion about placing the FMS program on budget?

ANSWER: First, let me clarify that the Foreign Military Aid program is not a part of the Defense Budget (function 050). The FMS credit program and a number of other military aid programs, collectively referred to as Security Assistance, appear in the International Affairs function (150) of the budget. While the Department of State is responsible for the International Affairs function, the military aid programs that are a part thereof are implemented by the Department of Defense.

The Administration has no objection to direct (on budget) credits per se. However, we are concerned that a sudden shift of the FMS Guaranty Credit Program on budget during a period of extreme budget pressure could result in major program disruptions. This in turn would seriously impair our ability to provide needed assistance to many of our friends and allies that would not otherwise be able to satisfy the legitimate defense needs.

Different Computer Languages

QUESTION: It is reported that the Defense Department uses an estimated 300 to 1,000 different computer languages. Software maintenance costs about $2 billion, a figure expected to rise to $16 billion by 1990.
If this report is correct, why do we need such a variety of software?

ANSWER: The Department of Defense has a large number of unique and diverse computer applications which are crucial to accomplishing our mission. There is no single computer language which could be used in all situations. Department of Defense Instruction 5000.31 is part of the control mechanism for reducing number of languages used for DoD systems. The development of the Ada® Programming Language is a part of a long term efort to continuing control costs and developing more effective systems.

It must be remembered that there are two kinds of software, that is applications software and development support software. The majority of the money is spent in the applications software. An increasing demand in that area is to be expected. The other software category is in development support and it is in that area that the Ada Program and the new Software Technology Initiative will have a major effect in controlling costs and improving quality.

New Computer Language

QUESTION: A new computer language has been developed for eventual use by NATO and computers controlling weapons systems. Some critics warn that it is so complex and mentally taxing to implement, that having to control nuclear weapons might make these computers more of a threat than the Soviets. What steps are being taken to simplify and improve this software system?

ANSWER: This new programming language is called Ada®. It was designed after an extensive requirements analysis and evaluation of existing programming languages showed that none of them could meet the needs in the embedded computer systems area. The language was designed in a competitive process and has received considerable public review. The comment that you have raised is only one of more than 5700 comments which have been received and responded to during the process of developing an industry-wide standard for the Ada programming language. During the last two years many changes to the language have been made to simplify and unify its concepts and to resolve various technical issues which have been raised. On February 17, 1983, Ada was accepted as an American National Standard. This is an indication of its acceptance by the computing industry as a whole.

Industrial Modernization Incentives Program

QUESTION: Would you furnish more details on the new DoD initiative, the Industrial Modernization Incentives Program. Specifically, what incentive would companies have to modernize their plants when there is no guarantee of a return on their investments if weapons costs don't come down?

ANSWER: The Industrial Modernization Incentives Program (IMIP) will develop and test various contract incentives to encourage industry to make productivity enhancing capital investments. The primary goal of the IMIP, from the DoD standpoint, is to reduce the cost and price of defense systems. The incentives will include shared savings rewards and contractor investment protection and are aimed at motivating contractors to invest their own funds. Data and information obtained during the test on the effects of various incentives and their motivational aspects will provide the opportunity to learn what works and what does not work, and to make adjustments accordingly. The expected result is increased defense contractor productivity with benefits for both the DoD and the contractors involved.

The incentive concepts employed (shared savings, contractor investment protection, and others) are intended to provide an acceptable ROI for a contractor and to result in reduced costs to the government. The program has to be structured to benefit both parties, otherwise an IMIP agreement will not make sense. A company's decision to participate in the IMIP and modernize its plant will ultimately depend on its own analysis of the probability of an acceptable ROI after consideration of IMIP incentives. But there is no guarantee of an acceptable ROI. There will be some risks involved for both parties. It is possible that contractors may propose IMIP arrangements that are not ultimately in their benefit, either because of events or mistakes. Longer term experience with the test IMIP will provide a better basis for understanding how serious this problem is. However, benefits can be expected to greatly outweigh risks upon initiation of any individual IMIP.

Rationale for Rejecting Multi-Year Offer

QUESTION: Mr. Secretary, are you aware of the rationale used to arrive at the decision to reject this multi-year offer?

ANSWER: Yes, sir, I am. The Defense Acquisition Regulations (DAR) were very clear on this issue. The Air Force had been discussing their planned competitive fighter engine strategy for F-15 and F-16 engines with both Pratt & Whitney and General Electric for over one year in an effort to refine the potential requirements/options. Because Pratt & Whitney's multi-year proposal addressed specific stated Air Force requirements which are to be fulfilled by competitive methods, the DAR precludes an award under non-competitive methods. The proposal was, therefore, rejected.

Evaluation of Proposal

QUESTION: Mr. Secretary, I assume that a careful evaluation of the proposal was accomplished, could you tell this committee your evaluation of the savings estimated and the warranties offered.

ANSWER: The Air Force conducted an assessment of the Pratt & Whitney Aircraft (PWA) proposal and found that PWA basically proposed those requirements which DoD planned to seek in our competitive request for proposal (RFP). The advertised life-cycle cost savings were those projected by PWA and were contingent upon the Department accepting all the terms and conditions proposed by PWA, including a five-year multi-year and DoD funding of necessary F100 engine modifications and incorporation of associated engineering change proposals. The Department expects life-cycle cost savings achievable with the competitive RFP to be equal to or greater than with the PWA multi-year. The warranty provisions offered by PWA are similar to those which the Air Force intends to seek in the competitive RFP. These warranty provisions represent significant improvements over those currently in effect on current production fighter engines and would require the contractor to accept more of the risk for his products in terms of performance, durability, and supportability.

Renegotiated Multi-Year

QUESTION: Mr. Secretary, in light of the forecast improvement in the economy would you expect a similar savings if this multi-year must be renegotiated at a later date with vendors less hungry, with shorter span of coverage, and with significantly reduced quantities of engines?

ANSWER: The early submission of the Pratt & Whitney multi-year proposal is a clear indication that faced with competition contractors are encouraged to offer a better deal. The Government and the taxpayers are best served by maximum use of competitive procurement. We expect continuation of the formal competitive process to result in attractive cost-saving multi-year proposals from both Pratt & Whitney and General Electric which meet Air Force requirements. We are convinced that this competition will yield benefits equal to or greater than those proposed by Pratt & Whitney in their multi-year proposal.

European Reaction to F110

Senator Andrews: Mr. Secretary, I would be interested to learn if our European allies, many of which have co-production agreements for the F100 engine, have been advised of the possibility of the F110 engine coming into the picture and if so, what has been the reaction?

Answer: As a part of the F-16 Steering Committee discussions, the European Participating Government (EPG) countries have been informed of our intent to compete the General Electric (GE)F110 and the Pratt & Whitney (PWA) F100 (modified with digital electronic engine control and gear drive main fuel pump) for future buys of F-15 and F-16 aircraft. The reaction from the EPG is focused on two areas of concern: (1) how the US will meet the third country offset arrangements for the F-16 and (2) potential loss of commonality between the US and European F-16 configuration should the GE F110 win a significant portion of the F-16 follow-on business. Third country offset amounts to a 15% obligation (1/3 of which is engine related) to the EPG countries. Our competitive RFP requires both GE and PWA to propose potential co-production and offset arrangements with the EPG. We have a continuing dialogue with the EPG on F-16 issues. We believe that these concerns related to the planned competition can be resolved.

QUESTIONS SUBMITTED BY SENATOR McCLURE

The Defense Budget Overview

QUESTION: The last time that Congress voted on the FY 1984 Defense Budget, that is last year on the FY 1983 First Concurrent Budget Resolution, Congress voted for a $25 billion increase in defense budget authority. The President proposed to increase defense in FY 1984 by $19 billion, almost all of the $25 billion already approved by Congress, thereby largely fulfilling his commitment to Congress. Why do you not call attention to the fact that Congress has already approved more than the President's FY 1984 defense increase of $19 billion? Indeed, Congress could add back the $6 billion the President has cut, to be consistent with its vote.

ANSWER: The FY 1984 Defense request of $273.4 billion in BA is close to the $273.2 billion projection made in the Budget Resolution last year. The primary reason for Congressional interest in reducing this request is not due to an easing of tension or a lessening of the threat but rather is inspired by a call for further federal fiscal constraint. Our request was prepared, and should be reviewed, in response to our assessment of the threat and not on arbitrary growth rates. Defense has shared in the budget reductions and will continue to seek further economies and efficiencies.

QUESTION: In defense outlays, how much is the President's defense budget above President Carter's projected defense outlays?

ANSWER: In March 1981, President Reagan increased the FY 1982-1986 Carter defense estimate by $186 billion in B/A and $117 billion in outlays. B/A has been reduced by $55 billion and outlays by $66 billion over this period.

QUESTION: In budget authority, how much has been cut out of the President's proposed defense buildup already? In outlays?

ANSWER: Our FY 1984 outlay estimate is $238.6 billion compared to President Carter's estimate of $232.2 billion made in his January 1981 budget submission.

QUESTION: The Soviets have already invested more than $710 billion more than the United States in defense since 1972. Of this, about $440 billion was in procurement, and $120 billion was in

RDT&E. The Soviets are already about $225 billion ahead of the United States in strategic offense and defense spending over the last decade. What are the implications of further United States defense spending cuts on the overall military capability gap and the strategic capability gap in particular?

ANSWER: The implications of further Congressional budget cuts for defense would inevitably mean a weakened defense, a less credible deterrent and a decrease in the quality of the leadership and personnel. The greater Soviet investment has meant an enhancement in the quality of Soviet arms as well as in the quality of Soviet training. The Soviets have extended their global reach, forcing the United States and our allies either to accept the imbalance that we found when this Administration took office, or to proceed, as we did, to increase our defenses so that we will be able to support our strategy with our capability.

Previous Administrations had allowed our strategic goals to far outstrip our capability to achieve them. This Administration has pledged, and has endeavored to raise our military and strategic capability to bring it in line with our strategy and security objectives. The Soviet Army now fields a comprehensive range of modern equipment. It is a fast-moving, highly flexible force. The United States has begun to create its own highly flexible force with such developments as the RDF, however, we must maintain a constancy in our programs if these improvements are to continue.

Decreases in the defense spending authority can only prevent needed readiness improvements and force modernization. We must proceed with all aspects of the President's strategic force modernization program if we are to close the gap between our present capability and the requirements for a stable deterrence.

Strategic Programs

QUESTION: Your FY 1984 Defense Posture Statement states on page 73:

> "We have redesigned and greatly strengthened the strategic planning process to provide increased assurance that our major force structure and budget decisions are driven by a clear understanding of our interests and objectives, an accurate appreciation of the threat..."

Yet your FY 1984 Defense Budget zeros production of our ALCM-B and reduces Trident I SLBM production, which is planned to be zeroed in FY 1985. These are our only two strategic weapons programs currently in production. How are these decisions on force structure related to our objective of closing the "window of vulnerability," achieving a "margin of safety," and redressing the Soviet strategic threat? What were the military and budget rationales for these decisions?

ANSWER: The two decisions that you cite are indeed keyed to redressing the Soviet strategic threat. We decided to stop production of the current generation cruise missile, the ALCM-B, in order to fill out our cruise missile inventory objective with an advanced cruise missile that will be much more effective in countering the projected Soviet air defense threat. Similarly, we decided, as announced last year, to reduce Trident I production in order to accelerate the rate of introduction of the more effective Trident II missile. This is accomplished by initially deploying Trident II missiles on three Trident SSBNs--numbers 9, 10 and 11--that were previously scheduled to be deployed with Trident I missiles. In addition to the military benefits of this proposal, it also yields significant cost savings from reduced numbers of Trident I missiles and Trident I unique ship installed equipments.

QUESTION: Please give me the status of the decision on the siting of the Over-the-Horizon Radar ground station in the Northwest. What are the criteria being used in selecting the site?

ANSWER: There are, at the present time, four locations being considered for siting the Over-the-Horizon (OTH) radar system in the Northwest. We anticipate that a final siting decision will be made late this year. The criteria used in making this final decision will be based on environmental, operational and resource impacts of each candidate site.

SUBCOMMITTEE RECESS

The subcommittee will be in recess until Thursday, February 24, when we will get the Army budget overview.

Secretary **Weinberger**. Thank you very much. You are very courteous, Mr. Chairman. We appreciate it very much.

[Whereupon, at 12:10 p.m., Wednesday, February 23, the subcommittee was recessed to reconvene at 10 a.m., Thursday, February 24, 1983.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1984

THURSDAY, FEBRUARY 24, 1983

U.S. Senate,
Subcommittee of the Committee on Appropriations,
Washington, D.C.

The subcommittee met at 10:10 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, Rudman, and Proxmire.

DEPARTMENT OF DEFENSE

Department of the Army

STATEMENT OF JOHN O. MARSH, JR., SECRETARY OF THE ARMY

ACCOMPANIED BY:

GEN. EDWARD C. MEYER, CHIEF OF STAFF, U.S. ARMY

MAJ. GEN. HAROLD W. DAVIS, JR., DIRECTOR OF ARMY BUDGET, OFFICE OF THE COMPTROLLER OF THE ARMY, DEPARTMENT OF THE ARMY

BUDGET REQUEST

Senator **Stevens**. Good morning.

This morning we will have a hearing in the form of an overview of the Army's budget request for the 1984 fiscal year.

That request totals $65.1 billion in budget authority, or an increase of 15 percent over the 1983 funding.

Total outlays are estimated at $59 billion and that is an increase of 13 percent over 1983.

This works out to a real growth that approaches somewhere around 11 percent in budget authority and about 9 percent in outlays.

The budget authority within the jurisdiction of this subcommittee totals $62.5 billion, up some $7.7 billion over this current fiscal year 1983 budget.

BUDGET AUTHORITY COMPARATIVE TABLE

We will ask the Army to supply a comparative table of the budget authority and outlays within the jurisdiction of the subcommittee for the 1982 through 1984 fiscal years and we will permit it in the record at this point.

[The table follows:]

BUDGET AUTHORITY AND OUTLAYS, FISCAL YEAR 1982–84

[In billions of dollars]

	Budget authority		
	Fiscal year 1982[1]	Fiscal year 1983	Fiscal year 1984
Military personnel	16.6	17.6	18.5
Operations and maintenance	16.8	17.5	19.7
Procurement	14.0	15.7	19.2
Research and Development	3.6	3.9	4.8
Military construction	1.1	1.0	1.5
Family housing	.9	.9	1.2
Other	.1	0	.2
Total	53.1	56.6	65.1

	Outlays		
	Fiscal year 1982[1]	Fiscal year 1983	Fiscal year 1984
Military personnel	16.5	17.4	18.4
Operations and maintenance	15.7	17.5	19.1
Procurement	8.4	11.8	15.0
Research and Development	3.2	3.7	4.4
Military construction	.9	1.0	1.0
Family housing	.8	.9	1.1
Other	−.2	−.1	0
Total	45.3	52.2	59.0

[1] Family housing included in totals.

INTRODUCTION OF WITNESS

Senator STEVENS. We welcome you again to our committee and, General Meyer, we note with a little bit of regret that this will be your last appearance before our committee. You have been before this committee, both when I was chairman and under the past chairman, many times. It is my understanding you are going to retire in June?

General MEYER. Yes.

Senator STEVENS. After 32 years of service, is that right?

General MEYER. Yes, sir.

Senator STEVENS. We hate to see you leave.

General MEYER. Thank you.

Senator STEVENS. You are too young to retire, General. We have to do something maybe about this retirement law. [Laughter.]

You young fellows ought not be be able to retire so quickly. That is all there is to it.

BIOGRAPHICAL SKETCH

We will put in the record at this point a statement of your long distinguished career, General.

[The biographical sketch follows:]

GEN. EDWARD C. MEYER

CHIEF OF STAFF

U.S. ARMY

General Edward C. Meyer was born in Saint Marys, Pennsylvania on 11 December 1928. He was graduated from the United States Military Academy in 1951 and commissioned in the infantry.

In the 1950s, he served as an infantry company commander and a battalion staff officer with the 40th Infantry Division in Korea, as an instructor at the Infantry School at Fort Benning, Georgia, and as an airborne company commander in the 101st Airborne Division at Fort Campbell, Kentucky.

In the 1960s, he served on the allied staff at Supreme Headquarters, Allied Powers, Europe and on the Department of the Army Staff in the Office of the Chief of Staff. He deployed with the 1st Cavalry Division to Vietnam in 1965 where he served as a deputy brigade commander and battalion commander. After three years on the Joint Staff in Washington, he returned to the 1st Cavalry in Vietnam to command a brigade and to serve as the division chief of staff.

In the early 1970s, General Meyer was a federal executive fellow at the Brookings Institution in Washington, D.C. Following an assignment as an assistant division commander in the 82nd Airborne Division, he was assigned as Deputy Commandant of the Army War College. Duty as the Deputy Chief of Staff for Operations and Plans of United States Army, Europe and as the Commanding General, 3rd Infantry Division followed.

In 1975 he returned to Washington to become Assistant Deputy Chief of Staff for Operations and Plans, and in 1976 he became the Deputy Chief of Staff for Operations and Plans. On 22 June 1979 General Meyer became the 29th Chief of Staff of the U.S. Army.

SUMMARY STATEMENT OF THE SECRETARY OF ARMY

Senator **STEVENS**. We do hope that you will be able to continue to work with those of us who support the Defense Establishment of this country and I know you will. I know we will see you in the years to come.

Good morning to you, too, General Davis. We are happy to have you here.

General **DAVIS**. Thank you.

Senator **STEVENS**. Let me print your statements in the record in full and let you handle them any way you wish. Then we will have questions when you finish.

I think this morning we will go to all three for whatever comments you have to make before we start questions.

Secretary **MARSH**. Thank you, Mr. Chairman.

As per your request, I will file my statement and simply summarize it.

First, it is a pleasure to be here again before this committee and have the opportunity to meet with you. We are engaged in a common endeavor which is to provide for the common defense.

The Army budget has been presented to you. It is based upon the necessity of our times and the threat we face. It has been formulated in response to that particular threat in order to preserve our national security.

The Army, 2 years ago, was faced with the choice of traveling one of two roads. The first road involved the expansion of forces. The second sought to develop a smaller, more capable, and more able force with adequate modernization, sustainability, and readiness.

We chose the second road and believe we have been able to achieve certain successes in doing that. We believe that today the Army is perceived by others to be a force whose strength and ability exceed its numbers.

There is a tremendous emphasis in the Army today on what we call the total force. As you know, the National Guard and the Reserve play roles in our national defense program.

There is an emphasis, as you will see in this budget, on modernization. Yet in that modernization program we are very concerned about the questions that have been raised by your committee and by others in reference to cost control and the proper management of the resources that you allocate to us.

If you were to ask me to identify a critical need of the Army, I would reply that it is one that is not within our jurisdiction. That need is deployment. We must improve our Nation's capability to move the Army by strategic lift, either by air or by sea. This is an area that is of serious concern to us and one that we very particularly need to have addressed.

You will see in this budget and in future budgets an increased emphasis on units called special operation forces. This flows from the Defense guidance given to the Army. Special operation forces relates to rangers, special forces, and civil affairs, and psychological warfare units. It is a further effort, as General Meyer will describe, to multiply or leverage our force.

I can say to you that the personnel area is a bright side of the Army picture. This past year, 86 percent of the young people who came in were high school graduates and their enormous ability is reflected in the Army today.

We saw an emphasis on physical fitness last year. That program has begun to take hold. The Army is a leader in that field.

In 1983, we seek to stress excellence and place special emphasis on what the Army must do to achieve an Army of excellence.

I also want to mention an item of interest. This year the Army has taken the lead in observing the bicentennial of the signing of the Treaty of Paris. That treaty, executed by our Government in September 1783, formally concluded the American Revolution, a revolution that was successful because of the contributions of the American Army.

You have noted the departure from the U.S. Army of our Chief of Staff. I concur in everything you have said.

I can say to you as the Secretary of the U.S. Army, the headway and the progress we have been able to enjoy the last several years is due in large measure to the leadership of General Meyer and those who serve under him. He is an outstanding officer who has made enormous contributions that I think are reflected in the readiness of our Army today.

That concludes my statement, sir.

[The prepared statement of Secretary Marsh follows:]

PREPARED STATEMENT OF JOHN O. MARSH, JR.

SECRETARY OF THE ARMY

Mr. Chairman, members of the committee.

It is a pleasure to again appear before you to discuss our Army and the Army budget request for fiscal year 1984. America can be proud of its land forces, an Army which is capable of defending our national security in this decade of international tensions and uncertainties. I welcome the opportunity to work with this committee to improve the effectiveness of the Army and its readiness and ability to meet the challenges of the present and the future.

As the principal manager of the Army, responsible for all its multiple activities, I am very much concerned with the stewardship of funds provided us by Congress. Our Total Army--Active, Reserve and Civilian Components--is committed to effectively using all the assets at our command to improve force readiness, achieve needed modernization, and support our soldiers in the most efficient manner possible.

To achieve these goals, the Army is requesting in FY 84 total obligational authority of $65.3 billion, which represents real growth in constant FY 84 dollars of 10.1 percent in comparison with our FY 83 request. Operation and maintenance funds account for 32 percent of our budget, personnel funds for 28 percent, and investment for 40 percent. This budget has been formulated with care, and contains only those programs absolutely necessary for maintaining the strength and effectiveness of our land forces.

With the funds provided the Army in FY 82, we have sustained our momentum toward force improvement which I discussed with you last year. Slowly, almost incrementally, we have improved the personnel, readiness, and materiel status of the Army, and its capability to operate across the entire spectrum of possible contingencies. We also have continued our very necessary modernization efforts, which will enable us to deter conflicts or fight effectively--and win--on tomorrow's battlefields. It is of the utmost importance that we maintain this momentum.

Two years ago, the Army was faced with a difficult choice. We could expand our end strength so that military commitments could be met around the globe, but in doing so we would have to accept an Army with less capable equipment in the hands of its soldiers, a slower rate of modernization, and reduced sustainability for combat. Our alternative was to maintain a smaller active force--the minimum essential to meet our commitments although with increased risk--so that we could continue essential modernization, increase readiness, and improve our sustainability. The policy decision was to choose the latter course, and it was a correct decision.

The strength of our Active Component is 780,000 soldiers. The sixteen divisions which constitute our active force--many of which are dependent on Reserve Component units to "round them out"--are barely adequate for today's national security obligations. We have shifted many less time-urgent defense requirements from our Active to our Reserve Components, but have reached a point where this is no longer a viable option. Any reduction in our active duty end strength would have to be in our forward deployed forces. Other nations are generally aware of our strength requirements; such a reduction would be perceived by our friends and potential enemies as a weakening of our land force capability and a diminishing of our international commitments.

A factor which makes our austere Active Army force posture acceptable in terms of Army missions is our continental-based active and reserve land forces. The Army depends upon its sister services to supply strategic mobility assets--both airlift and sealift--to assure initial deployment capability and long-term sustainability of these forces. Significant improvements in strategic mobility capabilities are required. The Army strongly supports initiatives by the Air Force and Navy to improve the status of the strategic airlift and sealift assets. Such improvements are necessary if the Army is to retain its credibility and effectiveness, as a deterrent and warfighting force.

The threat which faces our nation today has not radically changed from that which I described last year. Our potential enemies continue to steadily increase and qualitatively improve their armed forces. I do not intend to belabor the threat with which America is faced, nor will I cover in detail our interrelated modernization and readiness programs which prudence and potential enemies require. You are generally familiar with the nature of the global threat, and the FY 84 Army Posture Statement relates the primary thrust of our improvement and modernization initiatives. I would like instead to focus on three specific areas of interest--physical fitness, our Special Operations Forces, and the Army-wide drive for excellence.

An Army that is not physically fit cannot survive on the modern battlefield. I am pleased to report that the physical fitness initiatives which we implemented last year are producing results, and that today's Army is approaching a level of total physical fitness not heretofore experienced. Our physical fitness program is not focused just on the young soldiers at the forward edge of our fighting force and a requirement for them to maintain a specific level of performance in semi-annual tests. Instead, this program is Army-wide and applies to all ages and all aspects of physical fitness.

The modern Army physical fitness program includes conditioning, but also encompasses nutrition and diet, stress management, elimination of substance abuse, and an information program which emphasizes to our soldiers and their families the benefits of physical fitness. The Army Physical Fitness Center at Fort Benjamin Harrison is developing programs designed to educate leaders at each echelon about physical fitness. In a parallel effort, the Army Physical Fitness Institute at the Army War College is focusing on a variety of challenges including stress management, physical requirements for continuous combat operations, and conditioning criteria for soldiers beyond the age of 40.

The Army's physical fitness program is more than rhetoric. We have expanded our physical training tests and made them tougher. Graduation from schools and selection for promotion have been tied to physical conditioning criteria. Those who cannot meet certain levels of fitness are considered for elimination from the service. Similarly, there is no place in our Army for those who engage in substance abuse. Soldiers who drive while intoxicated and are apprehended by military authorities face a variety of penalties including mandatory loss of driving privileges for a year. If drug and alcohol abusers cannot be rehabilitated through our prevention and control programs, they are eliminated from the Army. Victory on the modern battlefield requires the highest level of physical conditioning. There is no room in our Army for those who are not physically fit.

A body of soldiers who exemplify the physical fitness about which I have been speaking are the Army's Special Operations Forces. These units provide us with an arsenal of skills not readily available in other units which can be tailored to the requirements of a given situation. Areas of expertise maintained in both Active and Reserve Component Special Operations Force units range from training other forces in counterterrorist activities and unconventional operations to conducting strike and intelligence operations behind enemy lines in mid- to high-intensity warfare. These are capabilities which are urgently required by our nation.

Formation of the 1st Special Operations Command at Fort Bragg, North Carolina in 1982 was a significant accomplishment in improving the effectiveness of Special Operations Forces. In addition to coordinating and improving the training of these highly effective units, this command will be the headquarters responsible for supervising and sustaining special mission units during actual operations.

I would like now to focus on excellence in the Army and its importance for us in the coming year. Achievement of excellence is difficult to judge because excellence for one person might be average performance for another. For the Army, obtaining excellence means setting realistic goals for improvement, working toward and achieving these goals, and then repeating the cycle. The end result will be to make our adequate soldiers good, our good soldiers better, and our better soldiers the best in the world. We can expect no more from our soldiers, nor can we accept any less.

For soldiers who may be required to engage an enemy equipped with extremely sophisticated equipment and weapons, there can be no substitute for technological and materiel excellence. Survival of the individual soldier depends on it. For an Army where small units may be subjected to previously unexperienced confusion and stress, there can be no substitute for excellence in individual training and leadership. Victory depends on it. For our Total Army--Active, Reserve and National Guard--who may be required to fight outnumbered on distant battlefields, and for the civilian component which supports them, there can be no substitute for a standard of excellence in terms of combat readiness. The security of the nation depends on it.

To achieve our goal of excellence, we need your continued support. The budget request for fiscal year 1984 is already austere. In compliance with administration guidance, we have reduced our programs to a level which we consider barely acceptable. There is no fat to cut--reduction in programs will result in destruction of muscle and sinew, and produce an overall degradation of the force.

The Army of today and the Army of tomorrow needs stabilization in terms of program execution, ranging from force development and planning programs to those for procurement of materiel. Instability produces confusion and inefficiency which we cannot tolerate. Force levels, and unit organizations--the basis for our personnel acquisition and materiel procurement actions--must be governed by requirements and missions, not by other factors. Procurement agencies must be allowed to utilize multi-year acquisition contracts in order to achieve maximum cost effectiveness for each dollar in our budget. Long-term development programs must receive financial support at constant levels if the Army is to continue as a combat-ready, effective, deterrent and combat force.

Before concluding my remarks, I would like to take this opportunity to urge the members of Congress and the people of our great Nation to actively support and participate in the bicentennial celebration of the signing of the Treaty of Paris in 1783. Historians describe this Treaty as the third most important document in United States history, the Declaration of Independence and the Constitution being the other two.

Commemoration of the actual Treaty signing and the events surrounding it are of great significance to the Army and the Nation which it serves. The Revolutionary War, which the Treaty of Paris formally concluded, won freedom and independence for the colonies. It also provided the opportunity to establish a national government.

Clearly, the bicentennial celebration of the Treaty of Paris is of great historical significance. It not only commemorates the culmination of a successful war effort but also marks the genesis of the American Army as a force capable of both achieving peace and providing an environment in which the nation could develop and ratify our Constitution.

The Army is as important to peace and stability today as it was in 1783. We are dedicated to maintaining its strength and vitality. I will be followed by General Meyer who will discuss the direction which the Army is taking as it improves combat readiness today while also preparing for the battles of tomorrow. I know that you will carefully consider his expert testimony and his views, with which I am in complete accord.

SUMMARY STATEMENT OF THE CHIEF OF STAFF

Senator STEVENS. General.

General MEYER. Thank you very much.

Mr. Secretary, thank you for your kind remarks.

I came before the House of Congress in May 1980 and said we had a "hollow" Army. If you look back to those days when I appeared before your committee, we did have a hollow Army—in people, in equipment, and in readiness and training.

Since that time you have given us $153 billion. I believe today that you have gotten your money's worth and the American people, including me, have gotten our money's worth.

We have a solid base on which to build the kind of Army we need for the future. There is a lot of concern about how well we do with the resources we are given. We have addressed that. But I think the base we have is solid.

The Army today is an Army in transition—in doctrine, in tactics, in manning, in training, and in equipment. What we have tried to do is to take the resources that we are given and concentrate on force multipliers—those things which permit us to get more out of the Army we have.

I have listed a few force multipliers in my statement. One method is by fighting smarter—designing strategies, tactics, and doctrine that will permit us to attack the enemy's weakness instead of his strength; employing techniques which hold his forces hostage instead of allowing him to hold our forces hostage.

The second force multiplier is having the right kind of equipment so that we can fight on the battlefield and win. As Secretary Marsh said, we made a decision not to increase the size of the Army, but to keep it small. Other services have gone up. We have stayed essentially the same size in order to improve our capability and achieve a quality Army.

It is not the biggest Army that will win on the next battlefield, but the best. That has been proven in the Falklands and elsewhere in land conflicts which have taken place in the last couple of years.

Our third force multiplier is good units and good soldiers. If you have good soldiers and good units, you have a tremendous force multiplier.

Increased pay for noncommissioned officers lets a soldier know he is important. We have been able to bring in good people and are in the process of implementing regimental and unit replacement systems. Gone are the things that you once read in the newspapers about turbulence.

The fourth force multiplier is strategic mobility, which Secretary Marsh spoke of. We are trying, within the means available to us, to improve the situation by making our forces lighter so they can be moved easily and quickly. As you know, out in the far west in Washington State we are going through a high technology light division effort to see what we can do to contribute to mobility by developing a hard-hitting, highly mobile, and deployable force.

Secretary Marsh spoke of a fifth multiplier, special operations forces, which can get behind the enemy and disrupt their rear areas, or can operate at the lower end of the conflict spectrum.

That is a quick overview of some of the major themes of the Army and areas we are emphasizing to transition to the Army of the future. There is a lot to be done. However, we are doing this slower than I believe necessary.

Also, as Senator Rudman pointed out yesterday, there are a lot of things we are not doing as well as we could or should. There are two things I would ask you to watch carefully as you go through your deliberations.

One is the people area. We now have an Army with good people and good people are staying in. In the future we need good people too.

The second area is modern equipment. We have to be sure we have such equipment not only for the active component, but for the Guard and Reserve as well. We must stay ahead of the enemy by giving soldiers equipment that will permit them to win on the next battlefield.

Those are the only two areas. If you keep those in the back of your mind as you go through your deliberations with regard to our budget, you will end up with a better Army and you will get more defense for the dollar.

Thank you, Mr. Chairman.

[The prepared statement of General Meyer follows:]

PREPARED STATEMENT OF GEN. EDWARD C. MEYER

CHIEF OF STAFF

U. S. ARMY

Mr. Chairman, members of the committee.

Once again it is my responsibility to appear before this body and assist in deliberations concerning our national defense. I welcome this opportunity to present my views regarding the Total Army's capability to fulfill its responsibilities for national defense.

In his remarks, Secretary Marsh indicated that our land forces are no longer the "hollow Army" which I first described to you in May of 1980. In the past three budgets, you--the Congress--have provided the Army with $153 billion. I believe the American people have gotten their money's worth. Neither you--nor the Army--has any reason to be apologetic. The resources you provided have permitted us to create a healthy base upon which to build the Army required by this Nation for the remainder of the twentieth century.

The Army is embarked on one of the most ambitious transformations it has ever attempted in peacetime. The Army is managing this transition toward the future with forward-looking programs in the areas of doctrine, manning, training and equipping which, when taken together, provide force multipliers that will provide more capability than anticipated from the resources which we have been given.

The first of these force multipliers is our evolving concept of how to fight on the modern battlefield. It recognizes that we cannot successfully confront an enemy who can outnumber us along a shallow line of contact at places and times of his choosing. If, however, we can anticipate his movements and wrench control of events from him before he commits his forces to the frontal battle, we can influence the tactical situation in our favor. We call this the AirLand Battle --a way of thinking and combining Army assets with those of the Air Force to disrupt an enemy advance by striking his reinforcing elements to create opportunities for us to use our maneuver elements. In doing so, we gain battlefield leverage we have not heretofore possessed. By adding depth to the battlefield, we can also address the importance of being able to ensure the security of our rear areas.

The second force multiplier is the far more capable equipment we are now either fielding or developing. A few years ago, we made the fundamental decision not to increase our force structure and to concentrate the resources we were given toward investment in more capable equipment. This was a correct decision. You have supported the major items of equipment we are developing and procuring --items that can provide a quantum increase in battlefield effectiveness.

Our third force multiplier is our investment in good units and good soldiers. The quality of our force has improved dramatically over the past several years. Our recruits have more ability and are staying with us longer. We are keeping them together longer in their early training, and have adopted a new manning system for our combat units to ensure greater unit stability and cohesion by fostering the long-term association of soldiers with the same unit both at home and abroad. Commanders remain in command longer, become more proficient at their "go to war" skills, and provide better leadership for their soldiers. These measures have enhanced morale, training and readiness.

As our more effective tactics, more modern equipment, and better soldiers have begun forging a more capable Army, we have turned our attention to a fourth force multiplier, strategic mobility. This is the capability to deploy our forces when and where they are needed overseas. The Army depends largely on our sister services for strategic mobility, but we believe we can contribute to strategic mobility by making our forces less demanding of airlift and sealift assets. At Fort Lewis, with our 9th Division, we are creating versatile, rapidly deployable light but hard-hitting forces for world-wide use. If, however, we are to capitalize on this potential, we need your support for essential financing procedures to capitalize on newly identified, high priority areas which have the potential to achieve significant combat capability improvement quickly. I specifically urge your support of our present High Technology Light Division effort and similar initiatives which can improve the strategic mobility of our forces.

Another way of gaining leverage is to work more closely with our allies. Collective security and Security Assistance, a fifth force multiplier, have long been hallmarks of our policies world-wide. This force multiplier is working, but it needs your specific attention and support. Increased financial help to our friends and allies through Foreign Military Sales (FMS) and the Special Defense Acquisition Fund (SDAF) continue to prove their value in offsetting the strategy-force mismatch inherent in America's global posture. Security Assistance provides the means for our friends to improve their own defensive postures, thereby lessening our own burden.

The final force multiplier I will highlight exists in our rapidly improving Special Operations Forces. These forces have been remarkably effective in providing the small unit training and assistance that many Third World governments need. Beyond their Security Assistance roles, these forces provide an essential capability to conduct operations in low-intensity conflict environments marked by terrorism, subversion, and guerrilla warfare. They can keep major conflict from erupting and help us and our friends by countering threats before they mature into greater concerns.

These are among the major themes that the Army has emphasized as we transition to an Army of excellence. They are low-cost, high-leverage approaches to national security that merit your support.

But this is an Army in transition. Much remains to be done. The budget before you will permit us to continue in our path toward excellence. Two areas in the budget--manning and equipping--merit particular attention.

We now have programs in being which attract and retain quality soldiers. Protect them!

We now have weapons systems and support systems coming into the Army which will permit our soldiers, Active, National Guard, and Army Reserve, [illegible] win on the battlefields of the future.

Another lever which you have continually expressed interest in is the effective integration of the Army National Guard and the Army Reserve into [illegible] true partnership with the Active Component. I am pleased to tell you that this budget will help us continue the progress begun in 1979, when for the first time since 1971, we saw stabilization and growth occur in the strength of all components. This budget continues that growth in strength and quality, increasing full-time manning by 7,000. It also funds improved school and special training. Not evident in the Reserve appropriations request is the Total Army distribution of modern equipment into Guard and Reserve inventories. This flow occurs in accordance with our long-standing rationale of giving it to those who will be called on to fight first. Almost $1 billion of this year's Army procurement account is projected to be distributed to the Reserve Components in future years. This year, as a result of earlier appropriations, some $750 million worth of newly procured equipment will be delivered into Guard and Reserve units. This equipment covers all categories, combat and support. Typical of the items to be delivered are the new M1 tank, the M60A3 tank, lightweight company mortars, improved TOW vehicles and command carriers, Roland and Chaparral air defense systems, trucks, forklifts, and expandable medical shelters. We have a long way to go, but genuine progress is being felt.

Arguments range about what is readiness, what is modernization, what is sustainability. The argument is moot where we still have soldiers without equipment. The new equipment will provide improved readiness because, in addition to better capability, it will also provide improved reliability, easier maintenance and better man-machine interface. We need your support for a stable procurement program which will provide enormous benefits and cost savings.

I continue to believe, as I indicated in last year's testimony, that there are better ways for our Nation to go about managing defense business. I say our Nation because it is not just the Office of the Secretary of Defense or the Joint Chiefs of Staff or the Service Departments that are involved. It is you--the Congress--the OMB and the agencies of the Defense Department that must come to grips with how we can come together as a group to ensure more and better defense for the dollars we spend.

I am proud of our Army, the people in it and the dedication they have toward the defense of our Nation. Admiral of the Fleet of the Soviet Union Gorshkov, Commander-in-Chief of the Soviet Navy since 1956, wrote: "There have virtually been no pure land and no pure sea wars, one principle remaining unchanged: the results of a victory in a campaign or in a war as a whole can be consolidated only by the land forces capable by their actual presence of asserting its reality." All the conflicts of the past year have again reemphasized the importance of well-trained, well-equipped and well-led ground forces. Our ability to deter wars in the future and our ability to win wars if deterrence fails will not be decided by how big our Army is--but by how good it is! We have the chance to have an Army of excellence. The approval of this budget will go a long way toward ensuring that we have that Army--today and tomorrow.

PREPARED STATEMENT

Senator **Stevens**. General Davis, have you any comment?

General **Davis**. Sir, I will submit a budget highlight summary for the record. I have no comments.

[The prepared statement of Major General Davis follows:]

PREPARED STATEMENT OF MAJ. GEN. HAROLD M. DAVIS, JR.

DIRECTOR OF ARMY BUDGET

OFFICE OF THE COMPTROLLER OF THE ARMY

I. INTRODUCTION

Mr. Chairman and members of the Committee, I appreciate this opportunity to present the Army's portion of the Department of Defense appropriations request. First I would like to make some opening remarks concerning the situation ahead of this nation.

The FY 1984 Army Budget request reflects a continued commitment to maintaining and enhancing the Army's ability to preserve this nation's security. This budget has been developed based on our existing and long-term military capability in the face of a growing threat--a threat which is primarily a result of a 20 year Soviet arms build-up and increasing local threats against our allies and friends.

The Soviets currently allocate an estimated 15% of their Gross National Product (GNP) to defense. This compares to the U.S. annual average spending of 5.9% of GNP on defense during the 1970's. A second measure of the Soviet efforts is to compare investment and production levels. In the area of General Purpose Forces, the Soviets have invested about 50% more than the U.S.; for Research and Development expenditures approximately twice our rate. This large spending gap has created a significant imbalance in conventional combat capability.

More important than "inputs" are "outputs". For example, between 1974 and 1982 the Soviets have produced more than twice as many tanks, five times as many armored vehicles (other than tanks), thirteen times as many artillery guns, and nineteen times as many surface-to-air missiles. The chart below shows how the difference between U.S. and Soviet spending levels has been reflected in the production of combat equipment. These rates of production enable the Soviets to continue their numerical advantages over us in most major categories of equipment.

PRODUCTION SUMMARY
OF SELECTED GROUND FORCE SYSTEMS

SYSTEMS	1974—82 ANNUAL *AVERAGE PRODUCTION RATIO* U.S.S.R.: U.S.	1982 PRODUCTION *RATIO* U.S.S.R.: U.S.
TANKS	2.7:1	4:1
OTHER ARMORED VEHICLES	7.6:1	11:1
ARTILLERY (100mm AND OVER)	13:1	8:1
MILITARY HELICOPTERS	3:1	3:1
SURFACE-TO-AIR MISSILES (NON PORTABLE)	19:1	78:1

Because the Soviets are engaged in a long-term buildup of what more and more looks like an offensive military arsenal, we must assume the burden of a long-term effort to defend against this threat. To defend against this new Soviet capability, the Army has been modernizing its fighting capability.

Today the Army is enhancing its combat capability with a more modern structure, and more modern weapons and equipment. To produce a lean, hard-hitting infantry division that will exploit technological opportunities and be designed for rapid deployment and sustainability, the Army is developing the High Technology Light Division (HTLD) The HTLD was chartered to formulate and validate, through field tests, new operational and organizational concepts and to provide a basis for a shortened materiel acquisition process leading to a light, hard hitting, deployable HTLD by FY 1986. Army Development and Employment Activity (ADEA) is funded in the FY 1984 budget to institutionalize the HTLD concept. It is an organization comprised of TRADOC, DARCOM, and FORSCOM assets which will continue to interface doctrinal and materiel concepts leading to acquisition requirements that will improve the combat power, agility, and sustainability of light forces with application to all Army Forces.

In the area of Equipment, the Army is not only procuring more modern weapons, i.e., M-1 tank, infantry and cavalry fighting vehicles, Blackhawk helicopter, and the Attack helicopter, but also has initiated a program to upgrade the older equipment in the U.S. active and reserve forces and then make these upgrades available to friendly and allied nations who still have U.S. original equipment. The intent is to apply appropriate new technology, developed in our modernization effort, to older marginally effective U.S. origin equipment to enhance its warfighting capability. The goal of this initiative is to have upgrades in the field in four years.

Our Equipment modernization effort extends to our Reserve components. The Army National Guard and Reserves continue to receive new procurement items through the total Army distribution of modern equipment into Guard and Reserve inventories. This flow occurs in accordance with our long standing rationale of giving it to those who will be called on to fight first. Almost $1 billion of this year's Army procurement account is projected to be distributed to the Reserve Components in future years. This equipment covers all categories, combat and support. Typical of the items to be delivered from FY 1984 procurement funds are Bradley Fighting Vehicle Systems, Armored Machine Guns, trucks, forklifts, graders and tactical radios.

The seven sections of my statement that follow provide a current view of the U.S. Army and our major programs for FY 1984. Throughout we attempt to point out our concerns and efforts to manage well the resources upon which we and the nation depend.

II. BUDGET OVERVIEW

GENERAL

The Army FY 1984 budget is $65.3 billion in Total Obligational Authority (TOA), which requires Budget Authority (BA) of $65.1 billion and Outlays of $59.0 billion. The following table shows the FY 1984 request in current and constant dollars in comparison with FY 1983 and FY 1982.

Department of Army
Budget Comparison
($ in Billions)

Current Price	1982*	1983	% Increase 82-83	1984	% Increase 83-84
TOA	53.0	57.2	7.9%	65.3	14.2%
BA	53.1	56.6	6.6%	65.1	15.0%
Outlays	45.3	52.2	15.2%	59.0	13.0%
Constant FY 1984 Price					
TOA	57.2	59.3	3.7%	65.3	10.1%
BA	57.3	58.7	2.4%	65.1	10.9%
Outlays	48.6	54.1	11.3%	59.0	9.1%

* Family Housing included in FY 1982 totals for comparison.

FY 1982 totals represent actual obligations and expenditures.

Our FY 1983 TOA level consists of the amount appropriated for the Army and reprograming adjustments.

The FY 1984 TOA request includes $62.6 billion before the Defense Subcommittee and $2.7 billion before the Military Construction Subcommittee. In addition, although not shown in the Army portion of the Defense Budget, the Army's share of Defense appropriations for Retired Pay is $5.6 billion: and Claims. $0.1 billion.

The table below provides a three year comparison of Army TOA by appropriation.

ARMY BUDGET
(TOA $ in millions)

	FY 1982 Actual	FY 1983 Estimate	FY 1984 Request
Military Personnel	16,602	17,551	18,517
Military Personnel, Army	14,020	14,605	15,215
National Guard Personnel, Army	1,511	1,699	1,915
Reserve Personnel, Army	1,071	1,247	1,387
Operation and Maintenance	16,770	17,880	19,667
Operation and Maintenance, Army	14,998	15,983	17,868
Operation and Maintenance, Army National Guard	1,105	1,191	1,135
Operation and Maintenance, Army Reserve	666	705	663
National Board for the Promotion of Rifle Practice	1	1	1
Army Family Housing	868*	977	1,241
Procurement	13,923	15,683	19,192
Aircraft Procurement	1,966	2,487	3,472
Missiles Procurement	2,131	2,267	3,089
Weapons & Tracked Combat Vehicles Procurement	3,746	4,699	4,934
Ammunition Procurement	2,323	2,122	2,334
Other Procurement	3,707	4,108	5,363
Equipment, National Guard	50	0	0
Research, Development, Test and Evaluation	3,620	3,885	4,792
Military Construction	1,084	1,027	1,483
Military Construction, Army	951	930	1,375
Military Construction, Army National Guard	68	55	55
Military Construction, Army Reserve	65	42	53
Stock Fund	176	221	409
Stock Fund War Reserves	176	221	255
Peacetime Stock Fund Inventories	0	0	154
TOTAL **	53,041	57,223	65,299

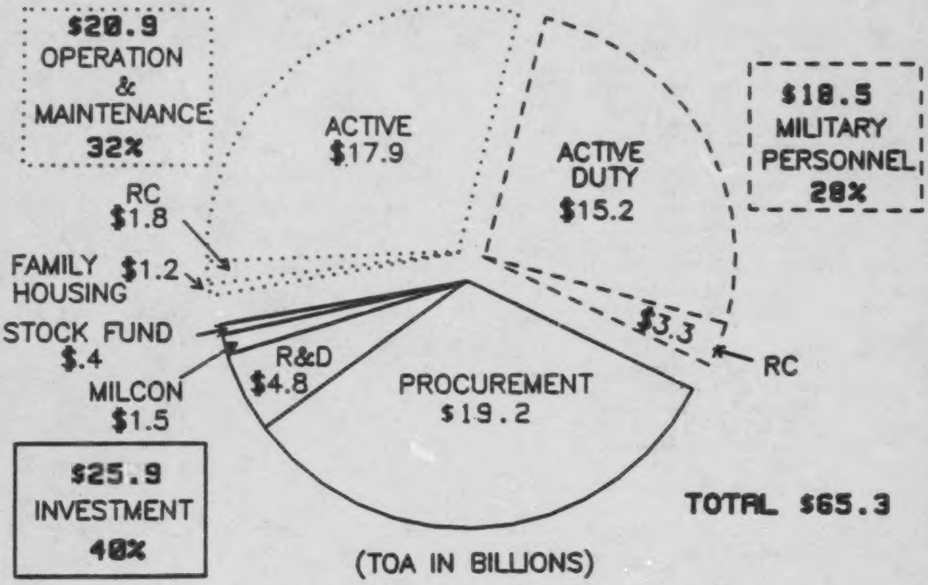
* FY 1982 Family Housing is included for comparison. Family Housing became an Army Appropriation in FY 1983.

** Columns may not add due to rounding.

Maintaining the Army

The following chart shows the distribution of the Army's FY 1984 Budget Request between Operation and Maintenance, Investment, and Military Personnel.

COST OF MAINTAINING THE ARMY
FY 1984

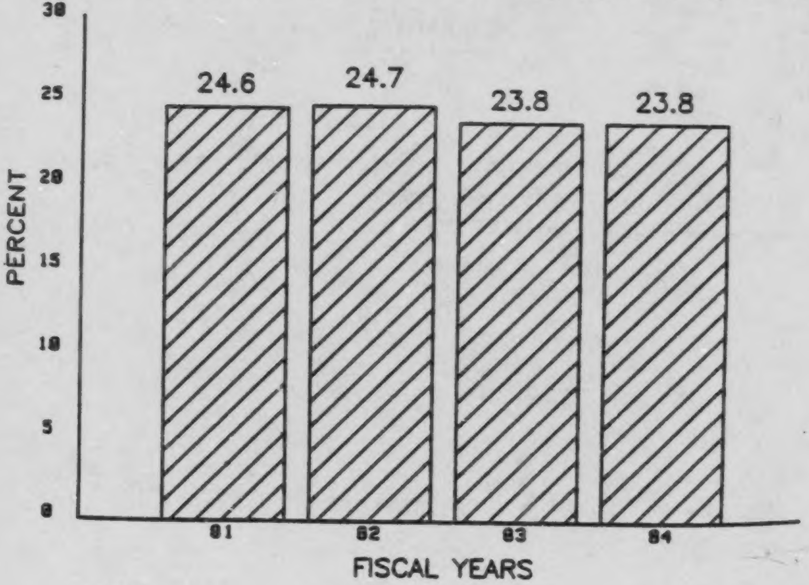


(TOA IN BILLIONS)

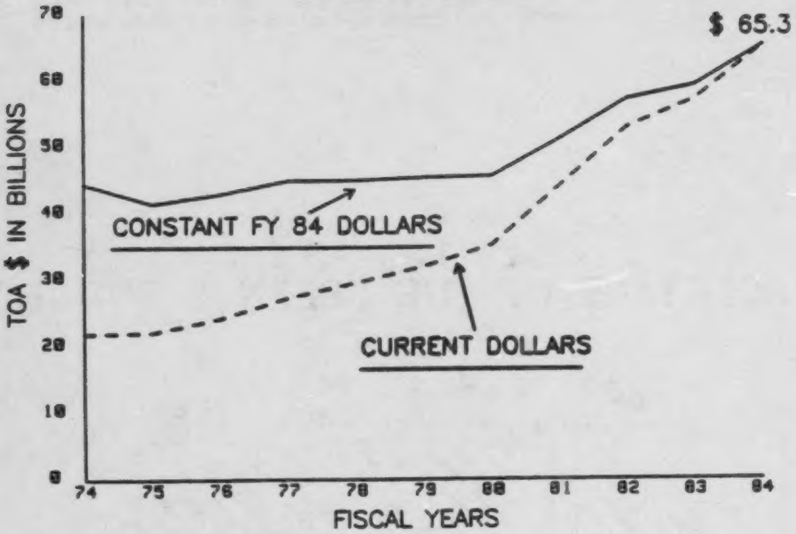
Army TOA Trends

The following two charts show the Army's TOA as a percentage of the Defense Budget and Army Budget trends in current and constant FY 1984 dollars.

ARMY TOA AS A PERCENTAGE OF THE DEFENSE BUDGET



ARMY BUDGET TOA TRENDS



NOTE: FAMILY HOUSING INCLUDED IN ALL YEARS

III. FY 1984 BUDGET OBJECTIVES

General

The total Army mission is to deter any attack against U.S. national interests and, if deterrence fails, to be able to defeat any enemy in any environment. Throughout this statement, we frequently mention the Total Army. It is made up of mutually supporting and mutually dependent components: the Active Army, the Army National Guard, the U.S. Army Reserve, and our civilian workforce. And even though many of the issues in this statement focus on the Active Army--largely because it is the first to use new equipment, organizations, and policies--we can accomplish our many missions only with the support and proper integration of the Total Army. The following two Charts outline the Total Army and our regional requirements.

THE TOTAL ARMY
FY 1984

THE ARMY'S MISSIONS:

- DETER ANY ATTACK ON US NATIONAL INTERESTS
- IF DETERRENCE FAILS, BE ABLE TO ENGAGE AND DEFEAT ANY ENEMY IN ANY ENVIRONMENT

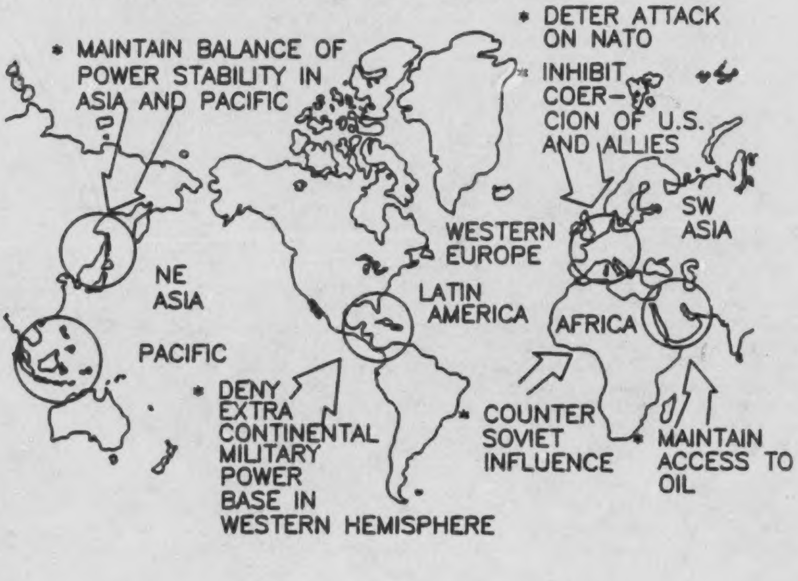
TO ACCOMPLISH THESE MISSIONS, THE TOTAL ARMY CONSISTS OF.

- ACTIVE FORCE COMPONENT
- RESERVE FORCES COMPONENT (ARMY NATIONAL GUARD AND ARMY RESERVE)
- CIVILIAN COMPONENT

ALL THREE COMPONENTS CONTRIBUTE TO THE DETERRENCE MISSION; IF DETERRENCE FAILS:

* ACTIVE COMPONENT	FORMS THE NUCLEUS OF THE INITIAL FORCES FOR COMBAT
* RESERVE COMPONENT	AUGMENTS ACTIVE FORCES AND PROVIDES INDIVIDUAL REPLACEMENTS
* CIVILIAN COMPONENT	PROVIDES CRITICAL SUPPORT AND SUSTAINMENT

REGIONAL REQUIREMENTS FY 1984


* DETER ATTACK ON NATO
* MAINTAIN BALANCE OF POWER STABILITY IN ASIA AND PACIFIC
* INHIBIT COER-CION OF U.S. AND ALLIES
SW ASIA
WESTERN EUROPE
NE ASIA
LATIN AMERICA
AFRICA
PACIFIC
* DENY EXTRA CONTINENTAL MILITARY POWER BASE IN WESTERN HEMISPHERE
* COUNTER SOVIET INFLUENCE
* MAINTAIN ACCESS TO OIL

The FY 1984 budget request of $65.3 billion supports the Army objectives for:

-MANNING THE FORCE. Attracting and retaining adequate numbers of qualified personnel in the active and reserve components to man the force structur and its supporting civilian work force.

-TRAINING THE FORCE. Providing for tough, realistic training that insures achievement and maintenance of individual and unit proficiency necessary to go to war and win.

-MODERNIZING THE FORCE. Providing a strong, modern, flexible Total Army structure, with the equipment and facilities necessary to meet the diverse threats to US interests. We seek a structure with the best attainable mix of units to fight successfully on the battlefield. We also seek to properly design, develop and produce the new weapon systems and facilities essential to the Total Army.

-MOBILIZING, DEPLOYING AND SUSTAINING THE FORCE. Providing assurance that the Total Army is postured in peacetime to mobilize and rapidly deploy its forces in wartime in accordance with established and exercised plans (to include the expansion of the continental United States (CONUS) training base); and providing the necessary resources and systems to support and sustain Army forces in any area of operations.

-ECONOMIES, EFFICIENCIES, AND MANAGEMENT IMPROVEMENTS. Ensuring that the resources are used efficiently and effectively so that the Nation receives the best possible defense from the investment of dollars and people in its Army.

Manning the Force

General. The Army's overall readiness is dependent upon acquiring and retaining sufficient quality personnel for the Total Army (Active, Reserve and Civilian components). The Army's manning effort was very successful in FY 1982. While the general economic conditions have been in our favor, a number of other factors contributed. These include increased recruiting resources, better manpower management, enhanced educational benefits, and the improving perception of military service in the eyes of the American Public. Additionally, and perhaps most importantly, for the first time in nearly a decade, military pay approached a level of comparability with the private sector. The impact of the FY 1983 pay cap of 4 percent, at a time when private sector wage growth was 8-9 percent cannot be fully assessed at this time. However, the relationship between pay comparability and recruiting and retention successes is undeniable. While we fully understand and appreciate the conditions which led to the President's decision that there would be no pay adjustment during FY 1984, we support the Secretary of Defense's determination to restore full pay comparability during FY 1985. If this (full restoral of pay comparability) is done, the impact of the FY 84 freeze on recruiting and retention may be relatively negligible.

Enlisted Recruiting FY 1982 was an excellent year for Army recruiting in both qualitative and quantitative measures. The Active Army achieved 86.0 percent high school diploma graduates, a 9.3 percent increase over FY 1981; and enlisted only 19.2 percent Mental Category IVs, a 30.9 percent improvement when compared to FY 1981. Our success allowed the Army to attract a balanced cross-section of American youth - 53 percent of our active non-prior service accessions were upper-half youth on the Armed Forces Qualification Test (AFQT); equal to the same percentage of the US youth population (age 18-23) scoring above average in 1980 test of the AFQT. More important is that the combat arms--infantry, armor and field artillery--received their fair share of the more talented soldiers, a reversal of the FY 80 experience. These advances toward our goal of a quality Army testify to the efficacy of our recruiters, our enlistment bonus program, our educational incentives and the effectiveness of our overall recruiting program.

The success of Active Army recruiting in FY 1982 was matched by the Reserve Components, reflecting our balanced approach in manning the Total Army. The US Army Reserve recruited over 74,000 soldiers thus achieving 112 percent of its total program objective. Qualitatively, 64.9 percent of the enlisted males without prior service were high school graduates and 86.2 percentage of all accessions were in AFQT categories I through IIIb, with only 13.8 percent in AFQT category IV. Meanwhile, the National Guard enlisted nearly 96,000 soldiers, 99.6 percent of its numerical objective. High school graduates comprised 68.4 percent of the Guard's male non-prior service accessions while only 11.8 percent of accessions fell into AFQT category IV. We are pleased to watch so many of America's young citizens stepping forward to assume a meaningful role in our nation's defense.

Enlisted Retention In FY 1982, substantially all reenlistment goals were achieved in both the Active and Reserve Components. Historically, the Army has had to concentrate on quantitative reenlistment objectives. In FY 1982 we were able to focus on quality. Thus, the challenge faced in the Active Army was to constrain the reenlistment of soldiers who wanted to reenlist but lacked the potential for further service. We anticipate that this favorable situation will continue in FY 1983. Make no mistake--the state of the economy has been a major contributing factor in our recent success. However, we must not forget that in the long run, as the economy improves, pay, benefits and bonuses available to reenlistment eligible soldiers will make the difference between retention and separation. This is especially true in the case of high-quality soldiers.

As the Army attracts higher caliber recruits, it will be essential to continue the Selective Reenlistment Bonus (SRB) program. This program has been extremely successful as a management tool in retaining high quality soldiers and creating a balanced force. Intense stewardship of Army SRB program made it highly cost effective. If the authority to pay SRB (and enlistment bonuses) is not extended beyond 31 March 1983, we run the risk of jeopardizing ability to retain the skills and quality that recent recruiting successes have allowed us to enlist and train.

Continued Congressional support of the Selective Reserve Incentive Program (SRIP) has been a major force behind improved retention in the Reserve Components. The bonus is aimed at increasing the personnel readiness conditions of specific units and military occupational specialities. The National Guard plans to reenlist 12,443 members for the bonus in FY 1983 and 12,500 members in FY 1984. The Reserve will offer reenlistment bonuses to 8,240 in FY 1983 and 8,040 in FY 1984.

Officers As with the enlisted force, FY 1982 was a successful year for the officer corps. We are accessing sufficient numbers of new officers for the Active Component through the US Military Academy, the Reserve Officers Training Corps (ROTC) and the Officer Candidate School. Looking for ways to improve the officer corps further, we are shifting our ROTC commissioning efforts to produce officers with the technical skills we most need. This will be accomplished by targeting ROTC scholarships to attract students who will pursue those academic disciplines required by the Army.

For the Reserve Components, however, there are still shortages. In the US Army Reserve, the number of officers in paid drill status grew by approximately 2,900 in FY 1982. The goal is to further increase the number of officers by 236 in FY 1983. These increases would still leave the USAR significantly below its wartime required strength. Initiatives are under way to improve the accession of officers in the US Army Reserve.

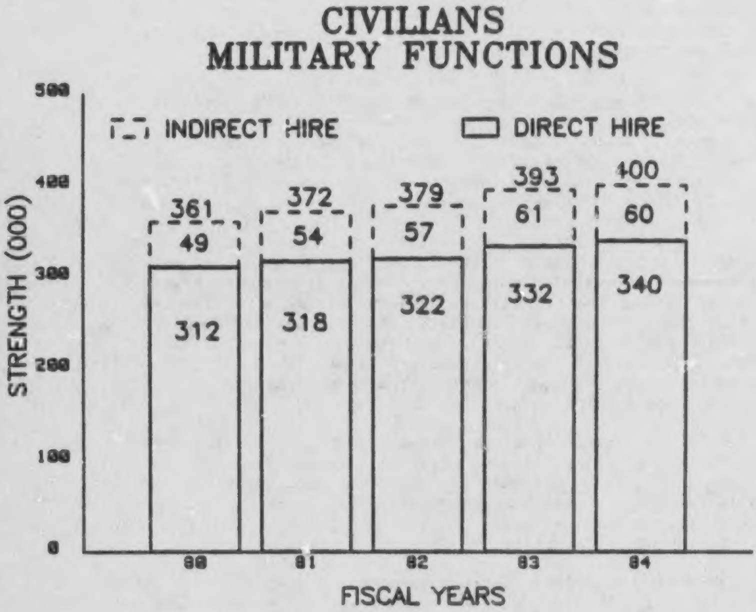
The Army National Guard officer strength increased by 2,000 to a record high of 40,000 in FY 1982. This increase is the largest in several years and the upward trend is projected to continue through FY 1984 for a total of 42,800.

Civilians. The Army civilian workforce is a critical component of the Total Army. Civilians provide outstanding service throughout the world to the three uniformed components of the Total Army. Civilian manpower is an invaluable resource that can be utilized selectively and in a timely manner as new mission and readiness needs dictate. It helps accomplish force structure changes, relieves manning shortfalls, provides stability, improves training, assists the modernization process and provides the base for mobilization and sustainability.

The FY 1984 Army civilian end strength request of nearly 400,000 reflects an increase of 7,000 over FY 1983. The growth in civilian end strength is primarily attributable to commercial activities restorals, National Guard and Reserve technician restorals, and an increase in industrially funded civilians. There are, however, several areas that will not get the full support required because of resource constraints. These areas are training and education, force structure support, soldier support programs, logistical support, support of new weapon systems, military construction and medical support.

The Army has continuously sought ways to support employment opportunities for family members of those civilian employees and members of the uniformed services serving overseas. The employment of family members is a significant contribution to the military family's standard of living and directly contributes to the attractiveness of overseas assignments to both civilian and military families. The Army has periodically converted indirect hire positions to direct hire positions to provide increased opportunities to overseas family members. In FY 1984 the Army has requested conversion of 2,100 indirect hire spaces to direct hire spaces for this worthwhile purpose.

The Army civilian end strength is displayed in the following chart:



Training the Force

An Army fights the way it is trained. The resources provided in this budget allow the preparation of American ground forces to engage and defeat a numerically superior enemy through emphasis on realistic individual and unit training.

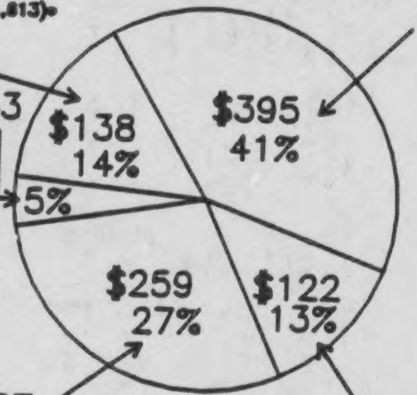
The FY 1984 Budget builds on existing training programs continuing major initiatives aimed at improving the training of today's Army. Improvements and increases are provided for noncommissioned officer training, enhancement of Signal Intelligence/Electronic Warfare training, and sufficient resources are provided to sustain increases to active and reserve component officer aviation training rates. Increased dollar and manpower resources are provided to support the integration of a multitude of new equipment and weapon systems into the Army's institutional and unit training programs.

The Army is well on the way to achieving its FY 1985 officer production goal of 10,500 with the FY 1983/84 academic year addition of 3,500 scholarships to the Senior ROTC Program. Individual clothing and equipment, personnel to develop mobilization programs of instruction, and engineering designs to support the post-mobilization training base surge are included in this request. The budget request contains a sizeable increase in training cadre to begin the task of restoring the Training Base, although the Training Base and supporting activities are not yet fully manned with the military and civilian manpower spaces required to meet increasing training requirements. The balance of the manpower deficit is being addressed in the current programing cycle.

Funding is provided for continued development of the National Training Center and to support training for 24 battalion task force rotations. This includes participation by three National Guard roundout battalions training at the Center with their active duty brigades. Funding will support Army participation in 13 Joint Chiefs of Staff (JCS) directed and 30 coordinated exercises. This Joint Exercise Program coupled with the National Training Center experience provides a well-rounded force training program for both our Active and Reserve Components and is supportive of mission plans. Support to unit training primarily provides improvements in maintaining and sustaining battalion level proficiency in the United States and sustains brigade proficiency in Europe. The training status of the Reserve Components is further improved through increased participation in joint exercises, overseas deployment exercises and expanded support for affiliation partnership programs.

The following two charts summarize active Army operation and maintenance training resources in the FY 1984 budget.

ACTIVE ARMY
INDIVIDUAL TRAINING – PROGRAM 8T M
($ IN MILLIONS)
FISCAL YEAR 1984



TOTAL: $957

FLIGHT TRAINING
- UNDERGRADUATE PILOT TRAINING (1,813)•
- OTHER PILOT TRAINING (293)•

PROF. EDUCATION $43
- NATIONAL DEFENSE UNIV. (300)•
- ARMY WAR COLLEGE (241)•
- COMMAND AND GENERAL STAFF COLLEGE (797)•
- DEFENSE SYSTEMS MANAGEMENT COLLEGE (246)•
- SERGEANTS MAJOR ACADEMY (279)•
- CIVIL SCHOOLS PROGRAM

SKILL TRAINING
- BASIC TRAINING (7 CENTERS) (19,559)•
- OSUT (7 CENTERS) (25,340)•
- INITIAL SKILL TRAINING
- SKILL PROGRESSION TRAINING
- FUNCTIONAL TRAINING

(46,751)•

- UNITED STATES MILITARY ACADEMY (4,417 CADETS)
- U.S. MILITARY ACADEMY PREP SCHOOL (438 CADETS)
- OFFICER CANDIDATE SCHOOL (287)•
- SENIOR ROTC (78,884 STU)
- ROTC ADVANCE CAMP (11,799 STUDENTS)

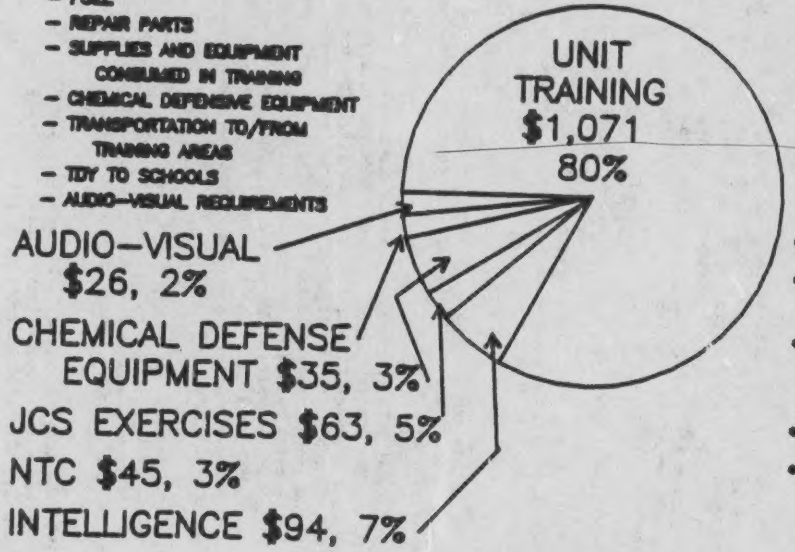
TRAINING SUPPORT
- TRAINING BASE
- DEPLOYED
- TRAINING SUPPORT CENTER
- TRAINING DEVICES AND PUBLICATIONS SUPPORT

TRAINING DEVELOPMENT
- INSTRUCTIONAL DEVELOPMENT
- TRAINING TECHNOLOGY
- TRAINING LITERATURE (SMs, CMs, SQTs)
- DOCTRINAL LITERATURE

• TRAINING LOADS (STUDENT WORKYEARS)

ACTIVE ARMY
TRAINING - PROGRAM 2 (MISSION)
($ IN MILLIONS)
FISCAL YEAR 1984

RESOURCES PROVIDE FOR:
- FUEL
- REPAIR PARTS
- SUPPLIES AND EQUIPMENT CONSUMED IN TRAINING
- CHEMICAL DEFENSIVE EQUIPMENT
- TRANSPORTATION TO/FROM TRAINING AREAS
- TDY TO SCHOOLS
- AUDIO-VISUAL REQUIREMENTS



TOTAL: $1,334

ACTIVITIES SUPPORTED:
- TRAINING EXERCISES
  - FIELD TRAINING (ARTEP, FDO)
  - COMMAND POST EXERCISES
  - DEPLOYMENT EXERCISES
- ENVIRONMENTAL TRAINING
  - COLD WEATHER (3 BDE, 5 BN EQ)
  - JUNGLE (13 BN)
- SUPPORT OF RESERVE COMPONENT TRG.
- NATIONAL TRAINING CENTER
  - 24 BN ROTATIONS
- PARTICIPATION IN JCS EXERCISES
  - 13 DIRECTED EXERCISES
  - 30 COORDINATED EXERCISES
- TRAINING OF INDIVIDUALS IN UNITS
- SMALL UNIT EXCHANGES
  - U.K. (2), CANADA (10), AUSTRALIA (1), NEW ZEALAND (1)
- AVIATION TRAINING (FLYING HOURS)
- INTELLIGENCE TRAINING

Modernizing the Force

Our objective is to modernize the Total Army 25-division force. We must ensure that modernization of the Active Force has positive effects on the Reserve Components. The two most critical tasks facing the Army today are: first, equipping the force to improve readiness and second, providing a sufficient level of modernization to improve our deterrence posture.

Modernizing Structure

The US Army must be able to fight in varying climates and terrain and at varying levels of conflict. To meet these requirements, the FY 1984 Total Army will increase its force to 25 combat divisions. It will include many other combat units, brigades and battalions, as well as many smaller specialized units. Nine of the 25 divisions will be Army National Guard divisions; four of the 16 Active Component divisions will include an Army National Guard roundout brigade; two of the 16 Active Component divisions also have Army Reserve roundout units.

Our assessment of future needs leads us to a force structure goal of 26 divisions by the late 1980's. This organization also includes units dedicated to rapid deployment missions, special operations forces, and forces capable of dealing with the broad spectrum of threats to our national interest. To move toward our goal, two military intelligence group headquarters, one PATRIOT air defense artillery battalion, and ten company-size units will be added to the Active Component in FY 1984.

The modernized battalions result from the introduction of: UH-60 Black Hawk helicopters to two aviation battalions; Bradley Fighting Vehicles to seven mechanized infantry battalions; the Multiple Launch Rocket System (MLRS) to five 8-inch field artillery battalions (which will become composite 8-inch MLRS battalions); and the M1 Abrams tank to four armored battalions and five armored cavalry squadrons.

In order to improve the reconnaissance and decontamination required to sustain operations in a nuclear, biological, or chemical (NBC) environment, one NBC company will be activated.

Our logistical force structure improves somewhat over FY 83, but remains austere. The FY 1984 budget request funds the activation of seven company-sized hybrid ammunition units as well as three forward support battalions for the transition to Division 86 structure. However, it also converts seventeen company-sized units from Active to Reserve Component status, and the program beyond FY 84 includes the activation of more than 30 company-sized logistical units. The Active Component combat service support structure needs additional increases to reduce the risk that logistical deficiencies might adversely affect combat operations, but we cannot reasonably include all these increases in FY 1984.

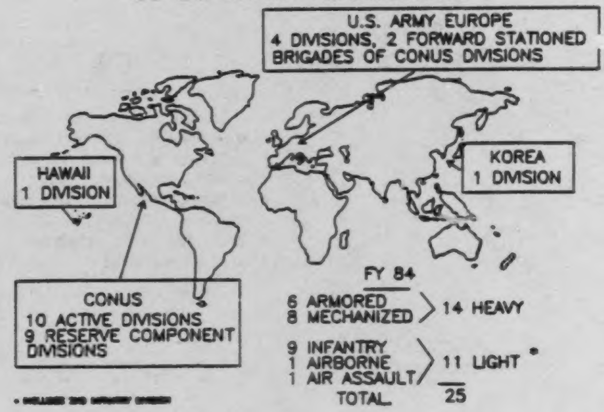
To improve further the Army National Guard and Army Reserve units supporting the Rapid Deployment Force, we are requesting funds for the assignment of additional full-time soldiers, additional drill periods, and other improvements for combat support/service support units.

In 1983 the Army converted units receiving the M1 tank, FVS, and MLRS to new more effective Army 86 designs. These new designs incorporate the results of testing (Division Restructuring Study, 1977-1979), lessons learned from 1973 Mideast Conflict, a changing threat, and an integrated look at all systems that will be available by the mid-80s. The new force designs improve operational effectiveness of units and optimize the combat effectiveness of existing and new systems. They provide an enhanced capability for continuous combat on a conventional or integrated (nuclear, chemical, electronic warfare) battlefield. Sustainability has been enhanced by providing full logistics support.

As part of a comprehensive plan which looks at the Army of the 1990's (Army 90 Transition Plan), the majority of units within active heavy division and their associated roundout will be converted to the new more effective unit designs with current types of equipment. With these conversions, units will be organized in the same format, increasing their effectiveness, providing a ready base to accept new systems, and commonality of doctrine and training. Units as they convert also go to their full wartime strengths reducing hollowness. The costs associated with these conversions are increased costs related mainly to changes to equipment densities and the number of smaller more flexible companies.

The fundamental objective of organizing the force is to deter war and, should deterrence fail, to provide sufficient forces to execute the national military strategy. The FY 1984 Army budget provides for five active divisions deployed overseas (four in Europe and one in Korea) as a major element of deterrence, while retaining 11 active and 9 Reserve Component divisions in the US to deploy and reinforce when needed. The 14 heavy--armor or mechanized--divisions are primarily oriented on meeting the tank heavy threat of the Soviet Union and its client states, while the 11 light divisions provide rapidly deployable forces for worldwide contingencies, including forested and built up areas in Europe. The following chart depicts the stationing of the 25-division force; the second and third charts highlight recent and programmed active and Reserve Component force structure improvements.

25 DIVISION STATIONING


U.S. ARMY EUROPE
4 DIVISIONS, 2 FORWARD STATIONED
BRIGADES OF CONUS DIVISIONS
HAWAII
1 DIVISION
KOREA
1 DIVISION
CONUS
10 ACTIVE DIVISIONS
9 RESERVE COMPONENT DIVISIONS
FY 84
6 ARMORED
8 MECHANIZED
14 HEAVY
9 INFANTRY
1 AIRBORNE
1 AIR ASSAULT
11 LIGHT *
TOTAL
25
* [illegible]

ACTIVE ARMY
FORCE STRUCTURE IMPROVEMENTS

FY 1982
ACTUAL

ACTIVATIONS

1 AD BATTALION (PATRIOT) (–)
1 QM PETROL & PIPELINE CO
1 HQ CORPS HEADQUARTERS
1 AV AVIATION BATTALION
4 MI BATTALIONS CEWI
*1 MI COMPANY CEWI
2 TC MVMT CNTL CENTERS
5 CM NBC DETACHMENTS
1 OD CONVL AMMUNITION COMPANY
1 TC MDM PETROL TRK COMPANY

CONVERSIONS

1 AV COMBAT AVN BATTALION (BLACKHAWK)
1 AV COMBAT SUPPORT AVN COMPANY
1 FA BATTALION (TO 155 MM)
3 AR BATTALIONS (TO M1)
4 MI BATTALIONS CEWI
2 MI HHD
3 CS MAINT COMPANIES
2 AR ATTACK HEL BATTALIONS
4 FA BATTALIONS 155/8IN
7 OD EXPLOS DISP DETACHMENTS

FY 1983
PROGRAMED

ACTIVATIONS

1 AV ATTACK HEL COMPANY
1 QM PETROL SUPPLY COMPANY
2 CS AREA SUPPORT GROUPS
1 AD BATTALION (PATRIOT) (–)
1 SC SIGNAL BATTALION (I CORPS)
3 CM NBC DEF COMPANIES
1 MD EVACUATION HOSPITAL

CONVERSIONS

3 AV COMBAT AVN BATTALIONS (BLACKHAWK)
1 AV ASSAULT HEL COMPANY (BLACKHAWK)
1 CS SUPPLY & SERVICE COMPANY
1 AD BATTALION (HAWK) (TRIAD)
9 OD CONVL AMMUNITION COMPANIES
3 SC SIGNAL BATTALIONS
9 TC LT–MDM TRUCK COMPANIES
3 MD MASH HOSPITALS

FY 1984
PROGRAMED

ACTIVATIONS

1 TC LACV COMPANY
1 CM NBC DEF COMPANY
9 OD CONV AMMUNITION COMPANIES
2 SC TACSATCOM COMPANIES
6 SF UNITS
1 AD BATTALION (PATRIOT) (–)
1 AV ATTACK HEL BATTALION
3 CS FORWARD SUPPORT BNS

CONVERSIONS

10 HEAVY DIV (DIV 86 DESIGN)
7 MD CBT SUPPORT HSP (3 MASH) (4 EVAC)
12 MI CEWI UNITS
9 OD AMMUNITION HQ
4 CS MAINT COMPANIES (DS)
2 AV ASLT SUPPORT HEL COMPANIES
1 AV COMBAT AVN BN (J–SERIES)

RESERVE COMPONENT FORCE STRUCTURE IMPROVEMENTS

FY 1982 ACTUAL

ACTIVATIONS

4 CM NBC DEF COMPANIES
1 CM SMOKE GENERATOR COMPANY
1 OD AMMUNITION COMPANY
1 QM POL SUPPLY COMPANY
3 CS MAINT COMPANIES
1 CS TACOM MMC
1 MAINT BATTALION HQ
1 CS COSCOM MMC
1 CS COLLECT & CLAS COMPANY
1 CS SUPPLY & SVC BN HQ
1 SC AIR TRAFFIC CONTROL GP HHD
2 MI BATTALION (CEWI)
5 MI COMPANIES (CEWI)

CONVERSIONS

5 OD CONVL AMMUNITION COMPANIES
1 SC SIGNAL COMPANY (G TO H SERIES)
2 SC SIGNAL BATTALIONS (G TO H SERIES)
16 CS MAINT CO. (TO NON—DIV MAINT CO.)
1 CS COSCOM HQ (TO TACOM HQ)
2 CS AREA SPT GROUPS (G TO H SERIES)
1 MP COMPANY
14 TC LT—MDM TRK COMPANIES
16 CS MAINT COMPANIES

FY 1983 PROGRAMED

ACTIVATIONS

3 QM PETROLEUM SUPPLY COMPANIES
2 CS SUPPLY & SVC COMPANIES
1 CS AIRDROP COMPANY
1 EN CONSTRUCTION COMPANY
4 EN PANEL BRIDGE COMPANIES
5 CM NBC DEFENSE COMPANIES
23 CM NBC DETACHMENTS
13 TC MOVEMENT CONTROL DETACHMENTS
2 MD CLEARING COMPANIES
10 AG P&A BATTALIONS (COSCOM)
1 MD FIELD HOSPITAL
1 MD AMBULANCE COMPANY
2 AG PERS SVC COMPANIES

CONVERSIONS

27 CS MAINT COMPANIES
3 CS TA SPT GROUPS HHC
4 SC AREA COMPANIES
1 EN ASLT FLOAT BRIDGE COMPANY
5 TC MDM TRK PETROL COMPANIES
1 MD EVAC HOSPITAL
8 MD MASH HOSPITALS

FY 1984 PROGRAMED

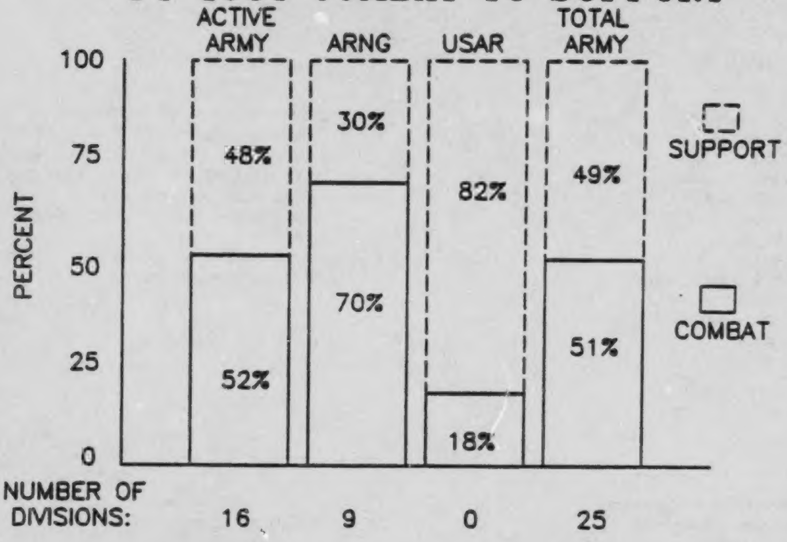
ACTIVATIONS

2 MD MASH HOSPITALS
1 MD CLEARING COMPANY
1 MD BDE HHD
8 TC MOVEMENT CONTL DETACHMENTS
1 TC RAILWAY BN HHC
1 TC MDM HEL COMPANY (–)
1 CM NBC PLATOON
1 AD BATTALION (ROLAND)
1 CM SMOKE GEN COMPANY
1 CM NBC DEF COMPANY
1 CM SMOKE BATTALION
2 CS LT MAINT COMPANIES
1 CS FIELD SVC COMPANY

CONVERSIONS

5 MD CBT SPT HSP (TO MASH/EVAC)
6 MD 300B HOSPITAL (G TO H SERIES)
15 AG PERS SVC CO. (TYPE E TO B)
7 TC TERMINAL SVC CO. (G TO H SERIES)
2 EN BDE ENGR COMPANIES (TO DIV 86)
2 EN BRIDGE COMPANIES
3 SEP BDES (TO DIV CONSOLIDATION)
1 EN FLOAT BRIDGE (TO DIV BRIDGE CO.)
14 CS MAINT CO. (DS)
6 MECHANIZED BN (TO DIV 86 DESIGN)
4 AR TANK BN (TO DIV 86 DESIGN)
1 AR TANK BN (TO M1)
12 OD AMMUNITION HQ
5 SC SIGNAL COMPANIES (TO AREA SIG)

Key elements of the Army's Total force structure are in the Reserve Components. The chart below depicts the Total Army combat to support ratios.



DISTRIBUTION OF FORCE STRUCTURE
FY 1984 COMBAT TO SUPPORT

Modernizing Equipment

To effect modernization we must accomplish timely design, development and procurement of modern weapons and equipment. The FY 1984 budget attempts to balance weapons and equipment modernization with the need to maintain force readiness by eliminating shortages in existing equipment. In FY 1984, we will continue to buy current systems, improve them when possible, and procure modernization systems when necessary. It is important to note that modernization not only provides us with more capable equipment but also contributes significantly to improved readiness. Shortages are being filled and over-age equipment is being replaced with new and improved equipment. This budget devotes $24.0 billion to the research, development, testing and evaluation, and acquisition of critical new force multipliers such as the Abrams Tank, Bradley Fighting Vehicle System, APACHE attack helicopter (AH-64), BLACKHAWK utility helicopter, PATRIOT and Division Air Defense (DIVAD) Gun air defense systems, PERSHING II and precision guided and improved nuclear/conventional munitions. The nuclear, biological and chemical defense readiness posture will be improved by funding chemical defense equipment, biological and chemical detecting devices, and decontamination apparatuses. The High Technology Light Division will serve as a means to formulate and validate new operational concepts with the objectives of having a light, hard hitting, deployable division by FY 1985. This year's budget requests for the High Technology Light Division focus on RDTE and Procurement to field the new divisions. They also establish the Army Development and Employment Activity (ADEA) whose main thrusts in FY 1984 will be to support the C3 capability of the division and the Army through evolutionary acquisition. Funds are also included for procurement of critically short combat service support equipment such as fuel and ammunition vehicles, materiel handling equipment, mobile automatic data processing equipment and generators. Despite the magnitude of the budget, major shortages will exist for supporting systems and equipment, including: battlefield recovery, ammunition handling and distribution, petroleum distribution, and war reserve stocks. There have also been investment opportunities in acquisition improvements, economies and efficiences that are still unfunded. All of these unfunded systems and opportunities have a lower priority than the systems funded in this Budget.

The following chart shows highlights of the Army's RDTE and Procurement appropriations.

ARMY RDTE & PROCUREMENT HIGHLIGHTS
($ IN MILLIONS)

		FISCAL YEARS 1982	 1983	 1984	 1985
CLOSE COMBAT	BFVS M2 M3				
	RDTE	103.4	46.8	9.1	24.8
	• PROCUREMENT ($ QTY)	808.7/600	870.6/600	885.3/600	1111.4/600
	(INITIAL SPARE PARTS)	(42.1)	(47.3)	(82.5)	(38.7)
	TANK M1				
	RDTE	28.6	11.8	0	0
	• PROCUREMENT ($ QTY)	1609.2/700	2026.6/855	1787.3/720	1789.7/720
	(INITIAL SPARE PARTS)	(81.4)	(114.4)	(148.0)	(0)
	ATK HELICOPTER AH64				
	RDTE	91.9	33.6	28.3	17.1
	PROCUREMENT ($ QTY)	537.0/11	865.2/48	1465.6/112	1414.8/144
	(INITIAL SPARE PARTS)	(34.7)	(93.1)	(165.1)	(164.0)
	SCOUT HELICOPTER (AHIP)				
	RDTE	36.8	73.6	83.7	34.3
	PROCUREMENT ($.QTY)	0	28.4	191.2	248.0
	(INITIAL SPARE PARTS)	(0)	(0)	(14.2)	(26.3)
	HELLFIRE				
	RDTE	23.1	16.3	0.8	0.6
	PROCUREMENT ($ QTY)	118.7/888	247.4/3871	240.7/5201	238.0/6020
	(INITIAL SPARE PARTS)	(1.5)	(1.1)	(1.8)	(2.3)
	LAV (ARMY INCREMENT)				
	RDTE	4.0	7.9	3.2	0
	• PROCUREMENT ($ QTY)	0/0	25.4/39	142.8/176	207.3/25
	(INITIAL SPARE PARTS)	(0)	(0.4)	(10.1)	(2.0)
FIRE SUPPORT	PERSHING II				
	RDTE	159.6	111.0	22.8	0
	PROCUREMENT ($ QTY)	218.3/21	–	432.8/96	445.2/104
	(INITIAL SPARE PARTS)	(27.7)	(0)	(25.1)	(13.8)
	MULTIPLE LAUNCH ROCKET SYS (MLRS)				
	RDTE	46.2	23.1	1.8	3.9
	• PROCUREMENT ($ QTY)	253.3/3466	444.4/23840	501.6/36000	613.8/50472
	(INITIAL SPARE PARTS)	(24.8)	(22.2)	(19.5)	(18.1)
AIR DEFENSE	SHORAD C2				
	RDTE	8.2	1.0	41.6	32.4
	PROCUREMENT ($ QTY)	0/0	0/0	0/0	84.1/0
	(INITIAL SPARE PARTS)	(0)	(0)	(0)	(4.8)
	STINGER				
	RDTE	16.6	0	0	0
	PROCUREMENT ($ QTY)	188.4/2844	212.1/2256	137.9/1608	348.7/2610
	(INITIAL SPARE PARTS)	(0.2)	(0)	(0)	(0)
	PATRIOT				
	RDTE	86.6	46.9	84.6	68.6
	PROCUREMENT ($ QTY)	747.3/176	848.8/287	1127.2/585	1312.1/918
	(INITIAL SPARE PARTS)	(70.3)	(76.8)	(138.2)	(138.4)
	DIVAD GUN				
	RDTE	29.9	18.9	0	0
	PROCUREMENT ($ QTY)	370.8/50	618.3/96	671.1/130	630.7/132
	(INITIAL SPARE PARTS)	(36.3)	(79.4)	(90.8)	(88.2)
COMBAT SUPPORT	QUICKFIX II				
	PROCUREMENT ($ QTY)	0/0	27.3/0	164.8/12	222.8/18
	(INITIAL SPARE PARTS)	(0)	(1.8)	(10.1)	(11.4)
	RPV				
	RDTE	78.6	77.7	138.1	103.0
	PROCUREMENT ($ QTY)	0/0	0/0	0/0	140.8/48
	(INITIAL SPARE PARTS)				(4.8)
	ENGINEER CONST EQUIP				
	• PROCUREMENT ($ QTY)	178.6	78.7	288.8	467.7
	(INITIAL SPARE PARTS)	(2.8)	(1.1)	(1.8)	(1.7)

ARMY RDTE & PROCUREMENT HIGHLIGHTS
($ IN MILLIONS)
CONTINUED

		FISCAL YEARS			
		1982	1983	1984	1985
COMBAT SERVICE SUPPORT	UH60A (BLACKHAWK)				
	• PROCUREMENT ($ QTY)	628.2/96	384.4/36	460.8/84	534.0/78
	(INITIAL SPARE PARTS)	(70.1)	(20.5)	(14.3)	(14.0)
	CH47 MODERNIZATION				
	• PROCUREMENT ($ QTY)	218.1/19	282.7/24	344.0/36	422.2/48
	(INITIAL SPARE PARTS)	(8.9)	(9.4)	(8.3)	(8.1)
	HMMWV				
	RDTE	3.0	3.3	0	0
	• PROCUREMENT ($ QTY)	0/0	38.8/1318	138.6/4218	303.6/9654
	(INITIAL SPARE PARTS)	(0)	(0.2)	(0.8)	(2.4)
	CUCV				
	• PROCUREMENT ($ QTY)	43.0/3033	181.5/13818	196.4/15346	390.1/24082
	(INITIAL SPARE PARTS)	(3.1)	(4.1)	(4.7)	(8.2)
	5 TON TRUCKS				
	• PROCUREMENT ($ QTY)	328.6/3698	388.4/4630	376.6/4489	403.8/4383
	(INITIAL SPARE PARTS)	(2.0)	(8.7)	(3.4)	(8.1)
	10 TON TRUCKS				
	• PROCUREMENT ($ QTY)	196.7/1308	380.8/2458	212.1/1310	412.7/2818
	(INITIAL SPARE PARTS)	(2.0)	(8.8)	(3.5)	(8.8)
COMMAND CONTROL AND COMMUNICATIONS	ARMY DATA DIST SYS (ADDS)				
	RDTE	28.8	35.0	43.9	46.2
	TRITAC (ARMY INCREMENT)				
	RDTE	43.6	43.8	46.8	28.7
	PROCUREMENT ($ QTY)	135.2/0	388.7/0	483.0/0	486.7/0
	(INITIAL SPARE PARTS)	(11.8)	(44.8)	(16.3)	(38.7)
	SINCGARS				
	RDTE	14.0	16.8	16.1	5.7
	• PROCUREMENT ($ QTY)	0/0	28.7/600	38.4/2200	168.8/5650
	(INITIAL SPARE PARTS)	(0)	(0.8)	(7.8)	(38.7)
STRATEGIC CONFLICT	BALLISTIC MISSILE DEFENSE				
	RDTE	462.1	518.1	709.3	1884.0

• MULTIYEAR PROCUREMENT

NOTE: PROCUREMENT DOLLARS INCLUDE COST OF INITIAL SPARE PARTS SHOWN IN ( )

Modernizing Facilities

The welfare of our soldiers, their families, and the civilian workforce is directly affected by living and working conditions. Adequate facilities foster improved morale and individual readiness; hence, they are key in maintaining combat readiness and the commitment of soldiers. The FY 1984 Military Construction, Army and Army Family Housing budget requests emphasize these facets. New or modernized unaccompanied housing facilities will accommodate 7,972 persons. Medical facilities at three installations will be expanded and altered in order to meet current standards. Community facilities will provide off-duty diversions. Modernization of existing, and construction of new, maintenance and production facilities will permit enhancement of force readiness. Construction of 759 and leasing of 20,608 family housing units, all of which are overseas, are requested. All of these projects must be accomplished if the Army is to modernize successfully.

Mobilizing, Deploying and Sustaining the Force

The Army must be able to equip, mobilize and deploy a force of sufficient size in a timely manner to influence the early stages of conflict.

Mobilization

This budget supports the placement of additional full-time military personnel from the active and reserve components into Army Reserve and National Guard units. The Full-Time Manning Program provides 19,514 skilled personnel to improve unit training and logistics and assist in mobilization planning and preparation.

The Army will implement a Department of Defense directed Individual Ready Reserve direct enlistment bonus program in FY 1983. This should attract additional quality accessions into this primary source of pretrained individual manpower for early wartime fillers and replacements.

The requirement for construction to support the expansion of the training base and troop support base during the first six months of mobilization is estimated at $2.9 billion. The FY 1983 budget provides funding for advance planning and design to help reduce the mobilization construction response time.

Individual clothing and equipment required for mobilization training base expansion continues to be funded in FY 1983 moving the Army gradually toward the capability to outfit 334,000 trainees during the first 90 days of mobilization.

The FY 1983 budget includes funding for layaway and maintenance of reserve standby industrial facilities which are critical to wartime production.

This budget continues the funding of the Army's biennial mobilization exercise whereby the continued analysis and documentation of mobilization and deployment issues are facilitated.

Mobilization (Industrial Preparedness)

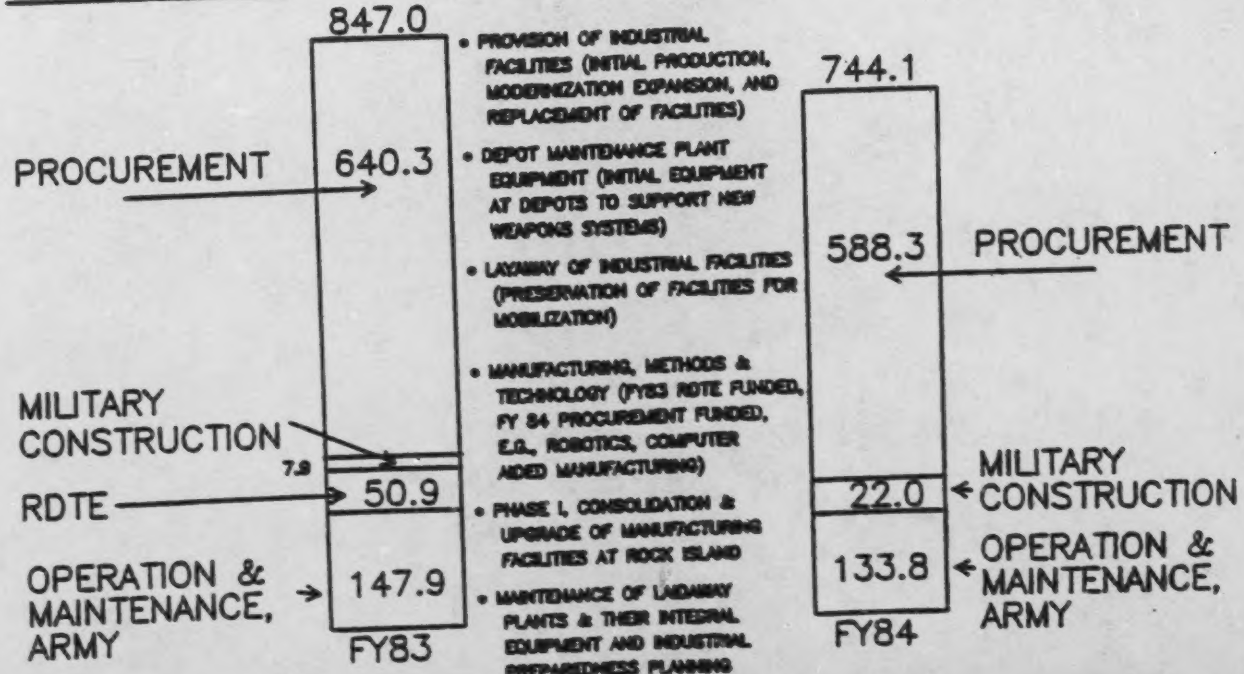
While the defense industrial base is not designed nor intended to compensate for inadequate war reserve stocks, it does provide the only source for long range sustainability of the force in the event of armed conflict. Furthermore, industrial preparedness provides the foundation for peacetime production by providing equipment and facilities to eliminate critical bottlenecks.

The reduction in funding for Industrial Preparedness in FY 1984 is due primarily to a restructuring of our Provision of Industrial Facilities program. The Army has shifted the acquisition of procurement-funded facilities for 105/120mm ammunition to FY 1985 to better align with expected production of new ammunition. Mobilization planning and maintenance of the Army's laid away reserve plants/equipment provide the best low cost alternative to the inordinate costs of replacing production equipment and procuring and stockpiling sufficient ammunition and related weapons to meet mobilization demands.

The following chart shows the Industrial Preparedness funding level for FY 1983 and FY 1984.

INDUSTRIAL PREPAREDNESS PROGRAM

($ IN MILLIONS)



WHAT THE INVESTMENT BUYS

- PROVISION OF INDUSTRIAL FACILITIES (INITIAL PRODUCTION, MODERNIZATION EXPANSION, AND REPLACEMENT OF FACILITIES)
- DEPOT MAINTENANCE PLANT EQUIPMENT (INITIAL EQUIPMENT AT DEPOTS TO SUPPORT NEW WEAPONS SYSTEMS)
- LAYAWAY OF INDUSTRIAL FACILITIES (PRESERVATION OF FACILITIES FOR MOBILIZATION)
- MANUFACTURING, METHODS & TECHNOLOGY (FY83 RDTE FUNDED, FY 84 PROCUREMENT FUNDED, E.G., ROBOTICS, COMPUTER AIDED MANUFACTURING)
- PHASE I, CONSOLIDATION & UPGRADE OF MANUFACTURING FACILITIES AT ROCK ISLAND
- MAINTENANCE OF LAYAWAY PLANTS & THEIR INTEGRAL EQUIPMENT AND INDUSTRIAL PREPAREDNESS PLANNING

Deployability

U.S. Strategic Mobility forces are currently unable to meet NATO reinforcement objectives or to project credible U.S. forces in areas where our national interests are threatened. Major mobility improvements in the Department of Defense FY 1984 budget are: the U.S. Air Force $813 million for KC-10 procurement/spares, $1,355.4 million for C-5 procurement/spares and $26.8 million for C-17 development for a total of $2.2 billion; the U.S. Navy FY 1984 budget contains $252.5 million to complete the conversion program of eight large, fast commercial SL-7 container ships to fast Roll On/Roll Off (RO/RO) ships which will support the deployment of Army units. The Army strongly supports the other Services' programs to reduce strategic lift shortfalls. However, actions are still required by both the Air Force and Navy, with Army support, to develop additional airlift and sealift programs which address the Army's current and future wartime strategic lift requirements.

The POMCUS program continues to receive emphasis. The percent of fill (in Short Tons) for Division Sets 1-4 decreased slightly in FY 1982 as a result of USAREUR's redefined force requirement and restructure of POMCUS, Force Modernization, and implementation of Division 86. It is critical that the Army be permitted to continue placing additional sets in Europe. Although the FY 1983 Appropriations Act deleted all funds for Division Sets 5 and 6, we have requested $43.3 million in FY 1984.

The military construction program for the Persian Gulf region calls for the development of two intermediate staging sites, which will in the near term reduce strategic mobility requirements, and in the long term improve the infrastructure for the Rapid Deployment Joint Force. The first of these facilities, at Ras Banas, Egypt, will provide austere cantonment areas for the Army and Air Force personnel as well as port, airfield, hospital, storage, and maintenance facilities. The FY 1984 budget contains $41 million for the first Ras Banas facility.

Sustainability

Army combat power is dependent on ready combat forces and the flexible network of support units and war reserve materiel needed to keep them fighting.

Inadequate combat service support force structure dictates a heavy reliance upon Host Nation Support (HNS) and on logistical support from the Army National Guard and the Army Reserve. Steady progress has been achieved in the area of obtaining host nation support for US forces. Korea provides extensive support through the Combined Defense Improvements Projects (CDIP) Program and efforts are underway to establish HNS discussions with selected Southwest Asia countries to support a rapid deployment force. In Europe, agreements have been concluded with the Netherlands, United Kingdom, Luxembourg, and Belgium. Other negotiations are either ongoing or being developed with Norway, Italy, Spain, Portugal, Denmark and Turkey. Support from Germany is extensive from both the civilian sector and military units under the terms of the US-GE Wartime HNS Agreement. The FY 1983 DoD Appropriation Act denied funding ($38 million) to begin to implement this Agreement. The FY 1984 Budget includes sufficient funds ($33.7 million) to implement the Agreement. Provision of FY 1984 funds is critical; otherwise, the US-GE Wartime HNS Agreement will most likely not be executed in its current form and the US Army will lose support from the 68,000 German reservists dedicated to provide combat service support during wartime.

There are shortages in bulk petroleum war reserve and deficiencies in our capability to deliver large volumes of petroleum over-the-shore in a bare base environment. Funds to improve petroleum units, bulk petroleum stocks, and over-the-shore delivery systems are requested in the FY 1984 budget. Some key equipment for petroleum units will be prepositioned in Europe, and the United States Army, Europe is improving its petroleum general support base. The FY 1984 budget request provides for equipping units planned for activation and for improving ammunition handling and distribution capabilities.

While some progress has been made in improving the posture of war reserve stocks, there are shortages in prepositioned stocks. Because the industrial base is incapable of significant contribution in the early phases of an emergency, it cannot be considered a substitute for our war reserves. Therefore, the FY 1984 budget provides for additional days of supply of ammunition, major and secondary items.

The FY 1984 budget request includes $63.6 million to continue efforts begun in FY 1982 to achieve a more effective program for care of supplies in storage (COSIS) in the continental United States (CONUS) depots. This is only one of many actions being taken to improve materiel readiness worldwide. The FY 1984 budget includes $80 million to continue our Air Line of Communication (ALOC) system, which was initiated in 1977. Under this extremely successful system urgently needed repair parts are flown to our forces in Europe, Korea, Alaska, and Hawaii.

Evaluation of the logistic support requirements for CENTCOM has shown a need for improvement in our Logistics-Over-The Shore (LOTS) capability. Congress appropriated $27.3 million in FY 1982 (plus $5.6 million for long lead time items) for four of the twelve LACV-30's required for the second company, and $54.2 million in FY 1983 for the remaining eight LACV-30's. The FY 1984 budget contains $54 million for four Landing Craft, Utility (LCS's) and one Logistic Support Vessel (LSV).

The FY 1984 budget contains $12 million for procurement of water distribution equipment for CENTCOM. Of this total, $9.7 million is budgeted for procurement of two Tactical Water Distribution Systems (TWDS). The first water support equipment available is being used during field exercises, to establish a training program at the National Training Center, and for distribution to selected units and CENTCOM contingency stocks.

Economies, Efficiencies, and Management Improvements

To Maximize the use of allocated resources, the Army established the Efficiencies, Economies and Management Improvement (EEMI) Program. The program is directly linked to the President's efforts to improve operations government-wide and reduce overall budget requirements. The EEMI program ties together the myriad of initiatives and practices for improving our way of doing business and achieving savings throughout the Army.

The Army has always recognized limitations on the resources available to support our operations, and actions to produce savings have been common practice over the years. EEMI formally focuses on these actions, as well as providing the impetus and the forum for new initiatives. As an incentive we are leaving the savings with the field commanders to fund high priority requirements which would otherwise not be accomplished. This has been a powerful motivator to save resources and we anticipate even greater savings in the future.

Using EEMI as the vehicle, the Army has placed greater emphasis on programs for reducing costs and increasing efficiency, especially those with potential for highest returns and lower costs. One of these is the Value Engineering (VE) program. This program has been averaging a return of $15 for each dollar invested and provides a means to identify and remove unnecessary costs from parts, services, maintenance and procedures while maintaining the required level of quality and performance. Value engineering proposals can be initiated by government contractors as well as by in-house Army employees. An example of a value engineering savings is the repairing of hydraulic systems without changing the oil. Repairs to hydraulic systems have always required the complete draining of oil to reach the broken part. This not only wasted the oil, but was time consuming, increased the risk of contaminating the hydraulic system. A new method was devised utilizing a vacuum pump which allows the repairman to siphon the oil away from the broken part, disconnect and cap the open lines, and remove the part for repair. In this way the oil remains in the system and is not wasted. The VE initiatives will save an estimated $17 million during the next three years.

The Productivity Capital Investment Program is another of our EEMI efforts and is designed to dedicate a portion of the budget toward productivity improvements that amortize in two-four years or less. The objective is to increase productivity, reduce costs, save manpower, and improve readiness. These programs yield an average return of $10 for every dollar invested. At Fort Bragg the purchase of $2,500 worth of weapons-cleaning equipment is resulting in an annual savings of $90,000 by eliminating the need to send the weapons to a central location for deep cleaning with phosphoric acid. In addition to the reduced cost, it provides the soldiers with additional hands-on experience with the weapons.

The Army Performance-Oriented Review and Standards (APORS) Program is a new program that will permit more efficient use of the resources allocated to us. This program resulted from a General Accounting Office idea. The APORS Program will use state-of-the-art management techniques, such as operations research, productivity capital investment funding, and industrial and management engineering to examine and make operational improvements in work centers throughout the Army. About 300,000 jobs will be subjected to these examinations over the next six years. GAO expectations are that through a multidiscipline analysis the Army can realize at least a four percent manpower savings. This would equate to 7,600 manpower spaces that could be reallocated without increasing authorization levels. This fiscal 1984 budget reflects the first increment, 1,[illegible]00 spaces, to meet other high priority requirements.

Another key element of EEMI efforts is the Commercial Activities Program. The objective of the Commercial Activities Program is to convert certain in-house commercial type functions to contracting in the private sector when cost effective, without degradation to military readiness. Between 1979-1982, contract conversions resulted in savings of 4,932 civilian and 1,551 military spaces, all of which have been reapplied to high priority Army missions. Contract conversions during this same period resulted in an estimated cost advantage to the government of $167 million dollars.

As this committee is aware, GAO has been reviewing the progress of DOD's economies and efficiencies effort during the past several months. Preliminary indications are that they have found our EEMI Program to be an open honest effort to save resources, and that there is a genuine interest among Army managers to improve the resources they manage. The President's Private Sector Survey on Cost Control has also looked into the EEMI Program and they were very supportive of our effort to save resources.

Overall, we have identified a potential savings of nearly $4.6 billion for the period FY 1981-1988 and expect to avoid another $2.9 billion in costs through such initiatives as multiyear procurement, elimination of marginal programs and productivity improvements. This budget request includes 110 initiatives which will result in estimated savings or cost avoidances of $990 million to FY 1984. Without these savings, the Army budget would have to be increased by an equal amount to achieve the results currently projected, or programs would have to be reduced to operate within the fiscal restraints.

The following table summarizes these EEMI initiatives and the savings and costs avoidances that result:

SUMMARY OF ECONOMIES, EFFICIENCIES AND MANAGEMENT IMPROVEMENTS (EEMI)
SAVINGS/COST AVOIDANCES
(TOA $ MILLIONS)

ACQUISITION INITIATIVES	ACTUAL FY 1982	BUDGET FY 1983	ESTIMATED FY 1984
Lower Cost Alternatives	.4	.7	.7
Multiyear Procurement	17.2	58.9	107.0
Economic Production Rates	60.1	165.7	173.8
Elim/Reduce Marginal Programs/Systems	119.5	165.4	204.7
Other Acquisition Improvements	192.7	112.9	45.2
Total Acquisition	389.9	503.6	531.4
OPERATIONS INITIATIVES			
Logistics Improvements	31.7	57.2	73.2
Elim/Reduce Marginal Programs/Systems	128.0	76.7	70.3
Base Realignments	1.0	3.5	10.1

Base Function Realignments	21.9	12.7	13.6
Administrative Overhead	52.2	59.5	58.8
Productivity Enhancements	207.5	26.6	134.5
Other Operation Improvements	16.0	13.5	98.6
Total Operations	458.3	249.7	459.1
Grand Total	848.2	753.3	990.5

Through the EEMI program the Army will continue to stress a heightened sense of managerial control and commitment as we continue our efforts to improve efficiency, conserve resources and enhance productivity. Stewardship of the taxpayers' dollars is serious business and efforts will continue to get maximum mileage from our allocated resources.

IV. APPROPRIATION SUMMARIES

General

The following chart summarizes the various Army appropriations.

FY 1984 ARMY BUDGET SUMMARY

(TOA - $ IN MILLIONS)

	FISCAL YEARS		
APPROPRIATIONS	1982	1983	1984
MILITARY PERSONNEL, ARMY	$14,020	$14,605	$15,215
OPERATION AND MAINTENANCE, ARMY	14,998	15,983	17,868
PROCUREMENT	13,923	15,683	19,192
AIRCRAFT	(1,966)	(2,487)	(3,472)
MISSILES	(2,131)	(2,267)	(3,089)
WTCV	(3,746)	(4,699)	(4,934)
AMMO	(2,323)	(2,122)	(2,334)
OTHER	(3,707)	(4,108)	(5,363)
NATIONAL GUARD EQUIPMENT	(50)	(–0–)	(–0–)
RESEARCH, DEVELOPMENT, TEST AND EVALUATION	3,620	3,885	4,792
MILITARY CONSTRUCTION, ARMY	951	930	1,375
ARMY FAMILY HOUSING	868*	977	1,241
RESERVE COMPONENT APPROPRIATIONS	4,486	4,939	5,208
STOCK FUNDS	176	221	409
TOTALS **	$53,041	$57,223	$65,299

* FY 82 FAMILY HOUSING IS INCLUDED FOR COMPARISON. FAMILY HOUSING BECAME AN ARMY APPROPRIATION IN FY 83.

** MAY NOT ADD DUE TO ROUNDING.

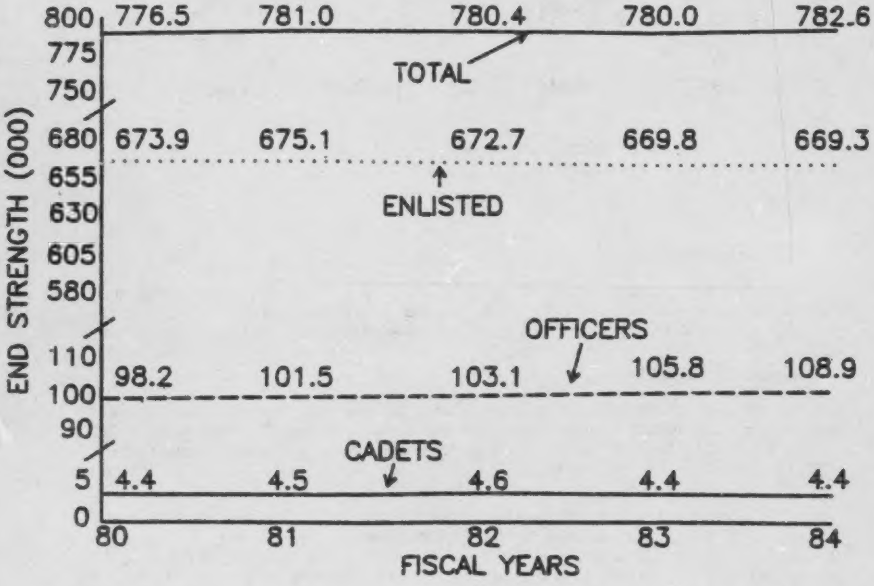
MILITARY PERSONNEL (TOA $ CURRENT BILLIONS)

FY 1982	FY 1983	FY 1984
$14.0	$14.6	$15.2

MILITARY PERSONNEL, ARMY (MPA)

The FY 1984 MPA request of $15.2 billion supports the following manpower program.

ACTIVE ARMY MANPOWER PROGRAM



A summary of the various pay and entitlement categories is shown on the following chart.

MILITARY PERSONNEL, ARMY (MPA)
($ IN MILLIONS)

	FISCAL YEARS		
	1982	1983	1984
PAY, OFFICERS	3,250	3,444	3,581
PAY, ENLISTED	8,892	9,242	9,424
PAY, CADETS	31	32	32
SUBSISTENCE	883	904	971
PCS TRAVEL	960	979	1,131
OTHER MIL. PERS. COSTS	4	4	76
TOTAL DIRECT PROGRAM	14,020	14,605	15,215

Officer Personnel

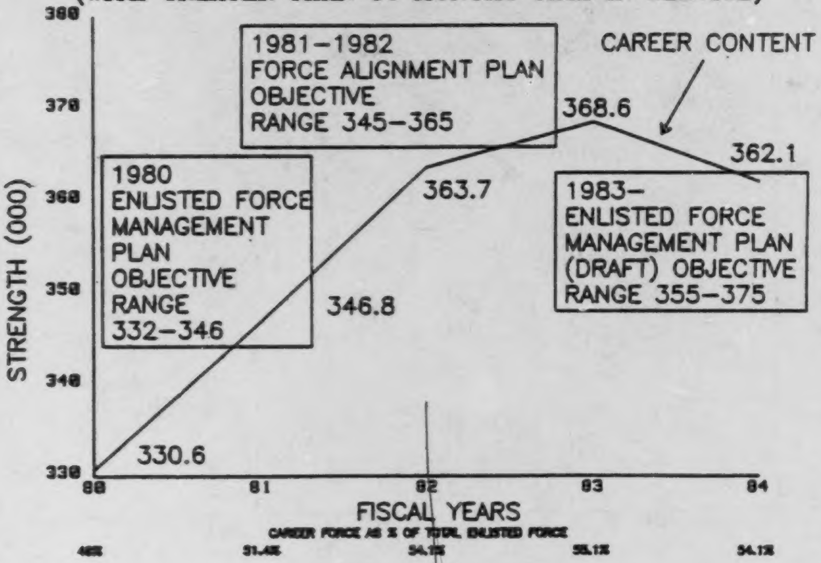
Officer end strength increases from 105,786 at the end of FY 1983 to 108,865 by the end of FY 1984. This strength increase of 3,079 is required to provide officers and warrant officers needed to man the force structure.

Enlisted Personnel

To reflect the increase in careerists, better man the existing force structure, and improve unit stability and cohesion, the FY 1984 budget will provide for 280,335 Top 5 enlisted grades against a projected demand of 280,335, which is a 100.0% fill.

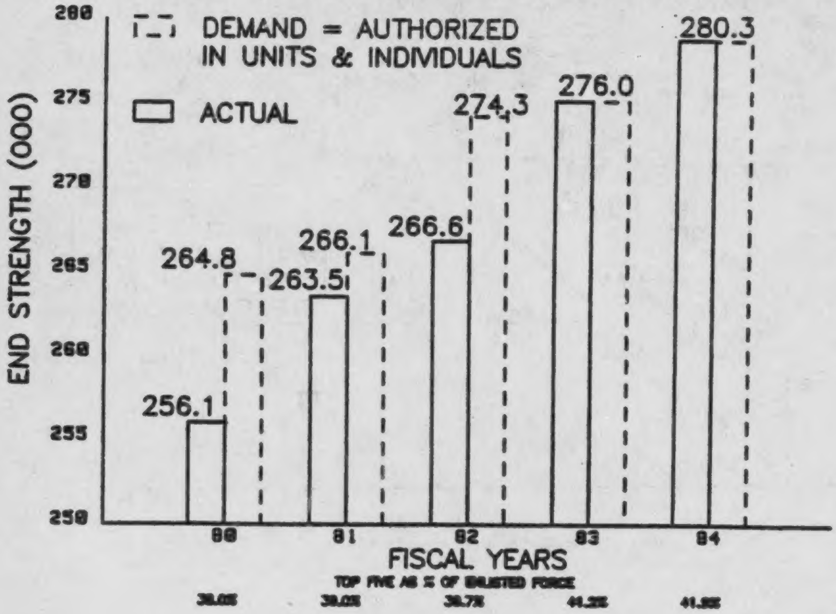
The next chart illustrates the trend in our careerists over the past several years and the estimates for FY 1983 and FY 1984. Due to the increase of first-term and career reenlistments, the Army is expecting to close the gap on the desired number of noncommissioned officers (E5-E9) for the first time by the end of FY 1983 and will retain sufficient numbers of careerists in FY 1984 to staff the total E5-E9 requirements. In addition to solving the aggregate NCO shortages, targeted incentives will vastly improve the shortage skill deficiency experienced in recent years in the career force.

ACTIVE ARMY
ENLISTED CAREER FORCE PROFILE
(WITH GREATER THAN 36 MONTHS TIME IN SERVICE)



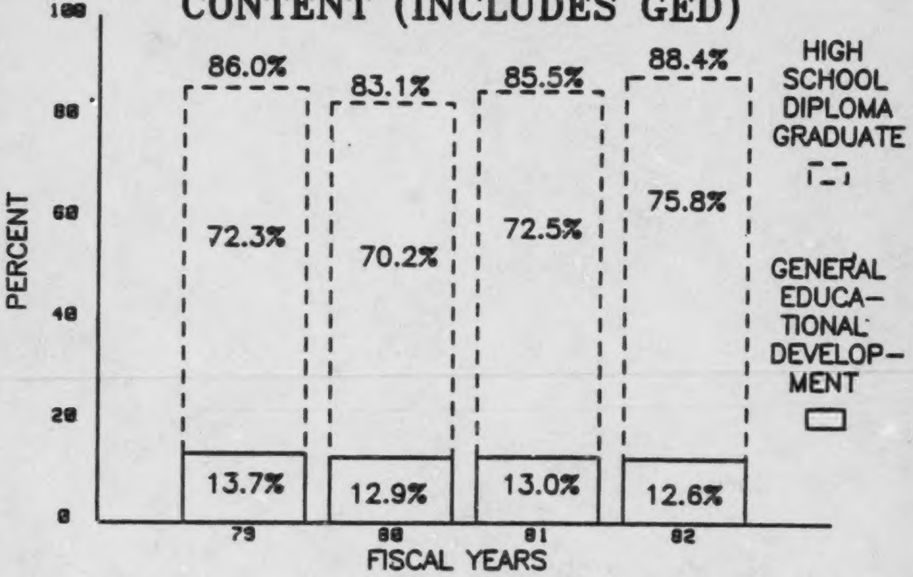
The following chart shows the end strengths of the Army's top five enlisted grades. One of the keys to an effective fighting force is having a qualified NCO of the right grade and MOS in every position. As the Army implements its planned force modernization and supports such new requirements as full-time manning, the need for NCOs in the top five grades will increase. However, as the following chart shows, in the aggregate the Army's chronic shortage in the top five enlisted grades will be eliminated in FY 1983. Some spot shortages or overages will continue to exist in some occupations, with shortages almost exclusively in the electronic warfare, intelligence and chemical specialties.

ACTIVE ARMY
TOP FIVE (E5–E9) GRADE MANAGEMENT



The high school graduate content of the active enlisted force is shown on the following chart.

ACTIVE ARMY
ENLISTED FORCE HIGH SCHOOL GRADUATE CONTENT (INCLUDES GED)



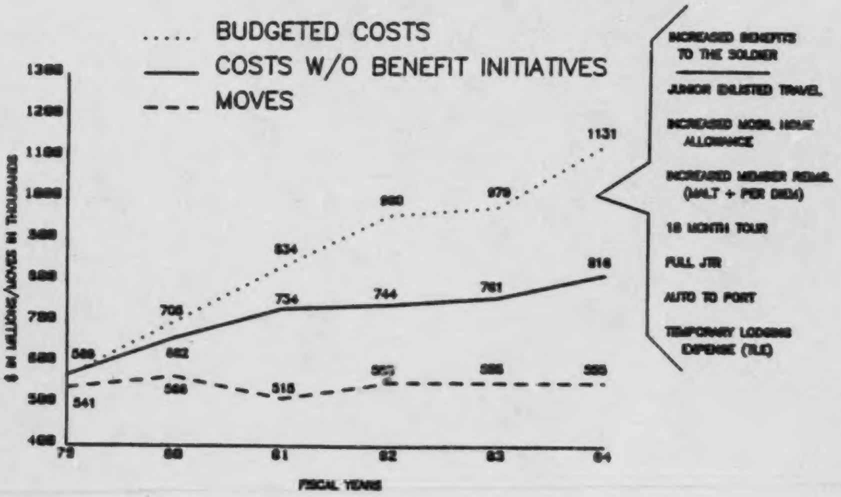
Permanent Change of Station (PCS) Travel

The FY 1984 budget request reflects the Army's continuing effort to reduce turbulence, increase stability, and consequently reduce PCS spending. Estimates reflect projected inflation and rate increases - $36.1 million. The budget request provides for increase to the amount of household goods authorized for shipment to overseas (Full JTR) - $38 million. The Full JTR policy is being reviewed (subsequent to budget release from OSD) and should it be found not beneficial for the Army, the Army will submit to the Congress a request to transfer Full JTR monies to the Army Family Housing Account to purchase furniture. Also included in the request are funds for temporary lodging expense (TLE) - $55.7 million as authorized by the Uniformed Services Pay Act of 1981 - to reimburse members more realistically for their PCS and alleviate the necessity for them to incur out-of pocket expenses during Army-directed PCS travel.

The number of moves is driven primarily by the commitment to deploy forces overseas (almost 40% of the force). All personnel overseas are on tours of prescribed length (either 12, 18, 24, or 36 months). In some special cases, tours are 48 months. Unless soldiers voluntarily extend, they make a PCS move back to the US after their prescribed tour. This generates a requirement for an additional PCS move from the CONUS sustaining base to fill that overseas space. These overseas moves represent 54% of the Army's total move program. If we add to this the requirement for every person entering (accessions) and leaving (separations) the Army which are also PCS moves, we account for 89% of the entire move program and 87% of the dollar requirement. The relatively small percentage, 11%, of the remaining PCS move program which consists of the training, operational, and organized unit travel categories is essential to maintain necessary readiness and training in the force.

The following chart portrays the trends of PCS moves and costs.

PCS
MOVES VS COSTS

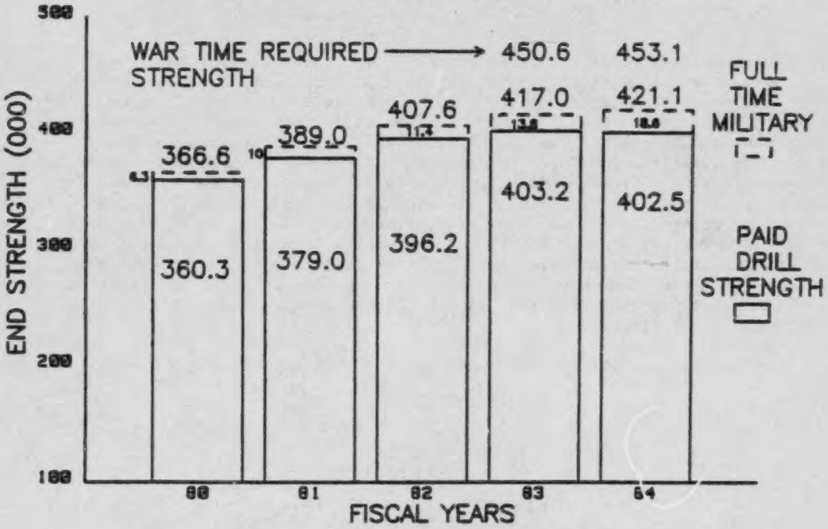


NATIONAL GUARD PERSONNEL, ARMY (NGPA)

The FY 1984 National Guard Personnel, Army budget request is $1.9 billion.

These resources provide pay and related expense for Army National Guard personnel. The following charts show Army National Guard personnel strengths and the pay and entitlement categories funded by the appropriation.

ARMY NATIONAL GUARD PERSONNEL STRENGTHS



NATIONAL GUARD PERSONNEL, ARMY
($ IN MILLIONS)

	FISCAL YEARS 1982	1983	1984
PAY GROUP A/P	$ 917	$ 994	$1,016
PAY GROUP F	196	205	235
SCHOOL PROGRAM	56	69	97
SPECIAL TRAINING	38	59	85
ADMINISTRATION AND SUPPORT	304	372	482
TOTAL	$1,511	$1,699	$1,915

PAY GROUPS FOR RESERVE COMPONENTS

A PERSONNEL ATTENDING 48 DRILL PERIODS AND 2 WEEKS ANNUAL TRAINING
D INDIVIDUAL MOBILIZATION AUGMENTEES (MOBILIZATION DESIGNEES) FROM IRR WHO PERFORM 2 WEEKS ANNUAL TRAINING
F NON PRIOR SERVICE PERSONNEL ON INITIAL ACTIVE DUTY TRAINING
P NON PRIOR SERVICE PERSONNEL AWAITING INITIAL ACTIVE DUTY TRAINING

The National Guard Personnel, Army (NGPA) funding categories for FY 1984 shown above support a total paid strength of 421,094. In addition to growth in paid strength, there is program growth in school/special training and administrative support. The school training program provides increases for avaitor training, new equipment training, technical and tactical skills proficiency training, and for development and enhancement of leadership skills for officers and enlisted personnel. Special training increases are largely in the areas of participation in training exercises and in training with Active Component units. Administration and support increases are due largely to growth in Full-Time Manning, support for ROLAND Battalion, and additions to the augmentation and Readiness Support Force. In addition, included within administration and support are bonus programs which amount to $49.1 Million.

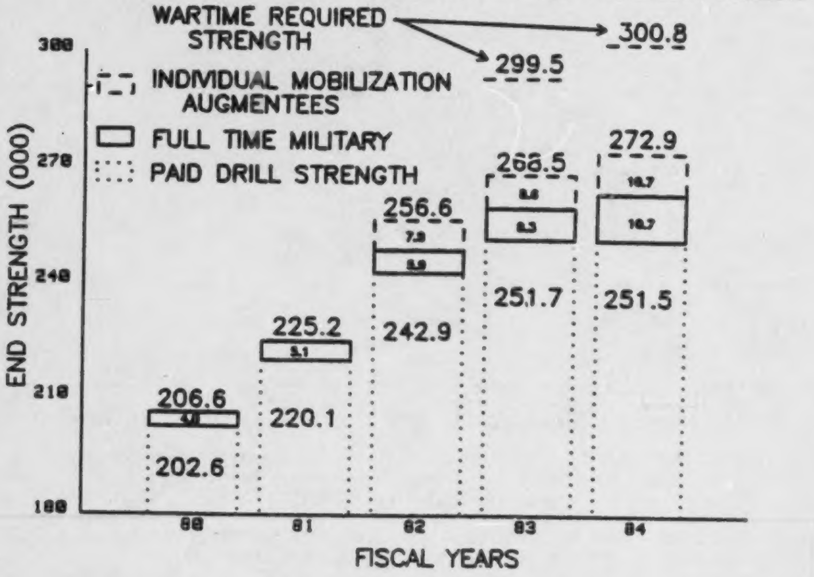
RESERVE PERSONNEL, ARMY (RPA)

The FY 1984 Reserve Personnel, Army budget request is $1.4 billion. This appropriation finances personnel costs associated with the United States Army Reserve, Reserve Officers Training Corps and Health Professions Scholarship programs. This request also funds an estimated end strength of 10,664 full-time military personnel to assist in organizing, administering, recruiting and training the Army Reserve.

In addition to paid drill or troop program unit strength, the Selected Reserve includes the full-time Active Guard and Reserve (AGR) personnel and Individual Mobilization Augmentees (IMA). Formerly known as Mobilization Designees, IMA's are members of the Individual Ready Reserve (IRR) assigned upon mobilization to positions in active component units and organizations.

Extension of the present recruiting and retention success coupled with quality improvement programs results in a forecasted FY 1984 paid drill end strength of 251,545, and a total Selected Reserve end strength of 272,927. The following two charts show Army Reserve strengths and the various pay and entitlements categories funded.

ARMY RESERVE PERSONNEL STRENGTHS



RESERVE PERSONNEL, ARMY

($ IN MILLIONS)

	FISCAL YEARS		
	1982	1983	1984
PAY GROUPS A/P	576	639	668
PAY GROUP F	134	153	139
PAY GROUP D	13	14	14
SCHOOL TRAINING	33	35	59
SPECIAL TRAINING	33	36	46
MOBILIZATION TRAINING (IRR)	36	53	53
ADMINISTRATION/SUPPORT	175	229	302
ROTC	55	72	91
CHAPLAIN CANDIDATE PROGRAM	0.5	0.5	0.5
HEALTH PROFESSIONS SCHOLARSHIP PROGRAM	16	15	15
TOTAL *	1,071	1,247	1,387

* TOTALS MAY NOT ADD DUE TO ROUNDING

PAY GROUPS FOR RESERVE COMPONENTS

A	PERSONNEL ATTENDING 48 DRILL PERIODS AND 2 WEEKS ANNUAL TRAINING
D	INDIVIDUAL MOBILIZATION AUGMENTEES (MOBILIZATION DESIGNEES) FROM IRR WHO PERFORM 2 WEEKS ANNUAL TRAINING
F	NON PRIOR SERVICE PERSONNEL ON INITIAL ACTIVE DUTY TRAINING
P	NON PRIOR SERVICE PERSONNEL AWAITING INITIAL ACTIVE DUTY TRAINING

The request provides for an increase in the readiness of the Army Reserve through increases in paid drill strength, full-time personnel, and training tours to improve both troop and individual readiness.

The request also supports increased ROTC enrollment to provide the additional officers required for the Total Army.

OPERATION AND MAINTENANCE (TOA $ CURRENT BILLIONS)

FY 1982	FY 1983	FY 1984
$15.0	$16.0	$17.9

OPERATION AND MAINTENANCE, ARMY (OMA)

The OMA appropriation provides support for functions such as training, wholesale supply, transportation, depot maintenance, recruiting, retention, base operations, maintenance of facilities and medical care. The FY 1984 request of $17.9 billion provides for the enhancement of near-term readiness of the existing force and maintains the capability to expand the force through mobilization. In FY 1984 there is $.8 billion of cost growth and a program growth of $1.0 billion which supports such improvements as: reducing the backlog of Real Property Maintenance (especially in overseas facilities);

increasing prepositioned war reserve materiel, communications, and the level of maintenance of materiel and logistical support; andimproving unit training by increasing the number of unit rotations through the National Training Center. Also included in this growth are the individual training in basic skills and Military Occupational Specialty training and expanding the physical fitness and aviator programs.

Another area receiving particular attention is the improvement of the Army combat capability through the fielding and support of new or modernized weapons and equipment systems. Required support for these systems includes transportation, initial stockage and replenishment repair parts, fuel, training courses, publications, facility modifications, and supply depot and maintenance depot operations.

Increases in civilian personnel for the OMA Appropriation approximate 5,000 spaces. Of this, approximately 2,000 are for the civilian substitution program, which will allow the reassignment of replaced military personnel to higher priority force structure needs. Also, this will increase approximately 1,400 spaces to the training base, and correct some long standing instructor shortfalls and Equipping-the-Force requirements.

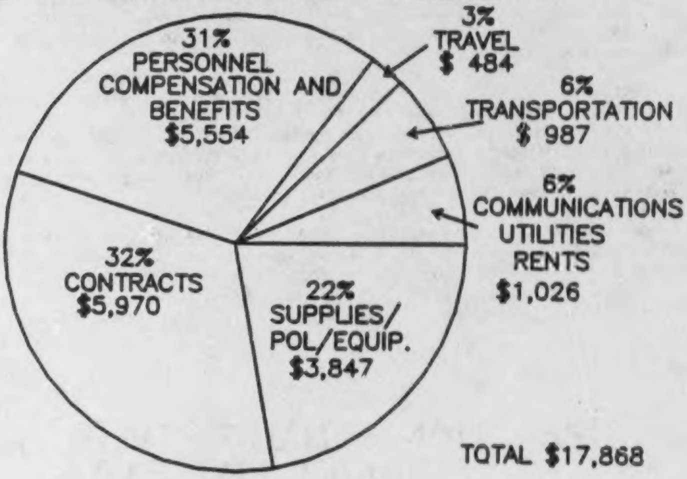
The distribution of Operation and Maintenance, Army by program for FY 1982, FY 1983, and FY 1984 is shown on the next chart. These figures include both mission and base operations (program 11 and 12) costs.

OPERATION & MAINTENANCE, ARMY
BUDGET PROGRAM
($ IN MILLIONS)

PROGRAM	FY 82	FY 83	COST GROWTH	PROGRAM GROWTH	FY 84	CHANGE
0 2 GENERAL PURPOSE FORCES	2,117	2,713	−67	476	3,122	409
0 3 INTELLIGENCE & COMMUNICATIONS	722	833	43	78	954	121
0 7 CENTRAL SUPPLY	2,067	2,698	252	−14	2,936	238
0 7 MAINTENANCE	1,540	1,785	146	−68	1,863	78
0 8 TRAINING	734	863	22	82	967	104[1]
0 8 MEDICAL	998	1,087	40	21	1,148	61
0 8 OTHER GENERAL PERSONNEL ACTIVITIES	462	487	18	55	560	73
0 9 ADMINISTRATION	863	789	17	41	847	58
0 10 SUPPORT OF OTHER NATIONS	108	96	13	−1	108	12
0 11 BASE OPERATIONS (LOG)	2,146	2,357	136	240	2,733	376
0 12 BASE OPERATIONS (RPMA)	2,043	2,275	172	185	2,632	357
TOTAL	14,960	15,983	791	1,084	17,868	1,885

The following chart breaks out FY 1984 OMA funding by type of expense financed.

OPERATION AND MAINTENANCE, ARMY
TYPE OF EXPENSE FINANCED



FY 1984

($ IN MILLIONS)

The following describes the Army's OMA Mission accounts.

General Purpose Forces - Program 2 (mission).
Program 2 provides resources to sustain the active Army combat and related combat support and combat service support forces. The program provides for training support and initiatives to include improved materiel support in the field which enhances the Army's capability to deploy and sustain the Army's land forces. Resources are also provided for combat development activities, to include Department of Defense directed testing, Army's costs associated with Joint Chiefs of Staff (JCS) Exercises and the Unified Commands for which the Army is designated administrative agent. The FY 1984 active force consists of 16 active divisions, 6 separate brigades and 3 armored cavalry regiments. Equipping the force and modernizing the Army's combat forces continue to increase. This is due to new and improved systems being fielded and organizations which are tailored to maximize the effectiveness of systems. The current FY 1984 request of $3,122 million is an increase of $409 million over the FY 1983 current estimate. Significant highlights are:

- o Equipping the Force - fielding such systems as:
  - oo M1 Abrams Tank
  - oo PATRIOT
  - oo MLRS
  - oo Bradley Fighting Vehicle Systems
  - oo DIVAD (Sgt York)

- Participation in 13 Joint Chiefs of Staff directed and 30 coordinated exercises.
- 24 Battalion Task Force rotations through the National Training Center.
- 9th Infantry Division, High Technology Light Division and the Army Development and Employment Activity.
- Enhanced Maintenance of Materiel and Logistics Support.
- Conversion of heavy units to Division 86 Designs.

Intelligence, Communications and Other Activities - Program 3 (mission) Provides resources for: strategic (non-tactical) communications; Worldwide Military Command and Control Systems Automatic Data Processing (WWMCCS-ADP); Air Traffic Control; National Foreign Intelligence Program supporting Department of Defense agencies and activities and National Command authorities; Foreign Counterintelligence and Security and Investigative Activities which support Army readiness, the Defense Communications System (DCS), the Joint Chiefs of Staff (JCS), the Office, Secretary of Defense (OSD) Command, Control, Communications and Intelligence and the Office, Director of Central Intelligence. The FY 1984 budget request continues to support the Defense Data Network (a data transmission network managed by the Defense Communications Agency) to upgrade the antiquated telephone system in Europe; and to improve the communications posture in Korea. The communications upgrades are centralized within the US Army Communications Command.

Of the total request of $954 million, the net increase of $121 million consists of $78 million in program growth and $43 million in cost growth. The following constitute the major items of program growth:

- Transfer from Program 2 Command, Control, Communications above Corps Level
- Equipping the Force
- Automatic Voice Network (AUTOVON)
- Joint Optical Information Network
- European Telephone System Upgrade
- Telecommunications Plan for Improvement of Communications in Korea
- Defense Data Network
- Defense Satellite Communications Systems
- Increased support to HUMINT Collection

Central Supply - Program 7-S (mission). Program 7 Supply supports operations of the Army's wholesale level supply and payment of first and second destination transportation for movement of supplies from production or depots to Army units or other users worldwide. Other activities supported include program implementation of Army procurement, operating commissaries, and maintenance of the reserve industrial base. The total current estimate of $2,936 million represents a net increase over the FY 1983 funding of $238 million. This total increase includes $-14 million decrease in program and $252 million increase for cost growth. This budget request will allow us to provide adequate wholesale supply and transportation support to the Army. No significant program increases are included. The principal program reduction requires deferral of maintenance of laidaway industrial plant equipment, funding for good business practice programs such as Care of Supplies in Storage (COSIS), and demilitarization of conventional ammunition to remain below current requirements at the demonstrated executable levels of FY 1982.

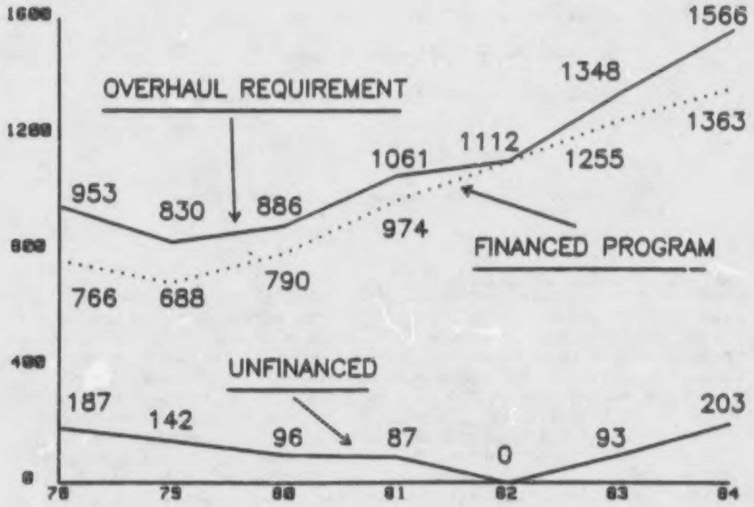
Depot Maintenance - Program 7-M (mission). The Depot Maintenance Program makes an important contribution to the Army's peacetime operations, training and warfighting capabilities by overhauling and modifying equipment and supporting the Total Army with maintenance engineering services. Furthermore, maintenance is an important element in the fielding and sustaining of new weapons systems. In FY 1982, the Army initiated a successful effort to fully finance all required hardware maintenance each year. In FY 1983 and 1984, the prudent risk of deferring some work in the near-term must be taken in order to afford other high priority modernization and readiness initiatives. The hardware maintenance unfunded requirement will grow to $203 million in FY 1984, while maintenance support functions remain underfunded by $287 million. The next chart depicts the trends and composition of the Depot Maintenance Program.

DEPOT MAINTENANCE PROGRAM

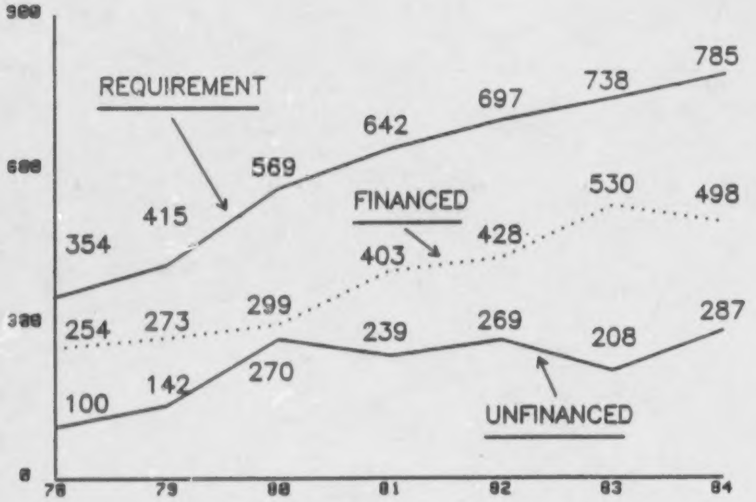
MATERIEL MAINTENANCE AND MAINTENANCE SUPPORT PROGRAM 7M

THE DEPOT MAINTENANCE PROGRAM HAS TWO ACTIVITIES: MATERIEL MAINTENANCE AND MAINTENANCE SUPPORT.

MATERIEL MAINTENANCE ACTIVITIES CONSIST PRIMARILY OF THE OVERHAUL, REPAIR, AND RENOVATION OF MATERIEL FOR RETURN TO THE SUPPLY SYSTEM.



MAINTENANCE SUPPORT ACTIVITIES INCLUDE MAINTENANCE ENGINEERING; UPDATE AND PRINTING OF MAINTENANCE PUBLICATIONS; NEW EQUIPMENT TRAINING; TECHNICAL ASSISTANCE TO TROOPS IN THE FIELD; PROVISIONING; AND DEVELOPMENT AND UPDATE OF DEPOT MAINTENANCE WORK REQUIREMENTS.



Training - Program 8 T (mission).
The Army institutional training program includes 9 Army Training Centers, 30 Army schools and colleges, and 6 Department of Defense and Joint Service schools, at a total of 22 installations. Included in this budget program are the US Military Academy and its Preparatory School, four Reserve Officers Training Corps (ROTC) regional headquarters, and 315 Senior ROTC detachments located on college and university campuses throughout the United States, Puerto Rico, Guam, and the Virgin Islands. The program also supports Army unique training provided to members of other services; Department of Defense and other Federal Agencies; selected local, state and national governments; and members of the Armed forces of other nations. Additionally, Program 8 Training provides for the development of training technology and the distribution of training materials in support of individual training conducted in Active and Reserve Component units.

Of the total Program 8 Training (mission) FY 1984 request of $957 million, the increase of $104 million above the FY 1983 level reflects $82 million in program growth and $22 million in cost growth.

Significant highlights for FY 1984 include:

- Increase number of trainers in the Army schools and training centers.
- Increase aviator production rates for both active and reserve components.
- Expand the NCO Education System.

- Increase resources to conduct and support individual training as a result of the introduction of new equipment and weapons systems into the Army inventory.
- Sustain the expansion of Basic Training from seven to eight weeks.
- Meet Defense Foreign Language Program requirements.
- Upgrade SIGINT/EW training for operators and maintenance personnel to support tactical and strategic requirements.
- Expand physical fitness program.

Even with the respectable dollar increases reflected in the FY 1984 Program 8 Training (mission) budget request, the Army's training base and training support activities - military and civilian - remain understaffed amid increasing Army training requirements.

Medical - Program 8 M (mission). Program 8 Medical provides health services in medical and dental facilities, training programs, for health specialties in military and civilian institutions, the command and administration of health services, medical processing of all Services enlistees, and other ancillary support activities. The total request of $1,148 million includes a net increase of $61 million, with $21 million in program growth, and $40 million in cost growth. The increase provides for:

- Modest increases in ancillary support personnel.
- Recapturing workload from the civilian sector (CHAMPUS) into the military direct health care system, thereby reducing the overall federal outlays.
- Increased studies and surveillance programs to identify occupational and environmental hazards.

Other General Personnel Activities - Program 8-O (mission). Program 8-Other supports active Army recruiting, advertising, and examining activities; the Army's Continuing Education Program for active duty military personnel; the Civilian Training, Education, and Development Program; and miscellaneous activities such as the Junior ROTC Program, disposition of remains, welfare and morale activities, the Armed Forces Overseas Entertainment Program, the American Forces Radio and Television Services, the US Army Disciplinary Barracks, the Army Reception Stations, and chaplain activities. Of the total request of $560 million, the net increase of $73 million consists of a $55 million program increase, and $18 million in cost growth. Significant program highlights are:

- Provides recruiter support necessary to increase mission quality i.e., 4,000 male HS diploma graduates.
- Upgrades computer shared by Selective Service System and MEPCOM.
- Provides resources necessary to fund claims for earned educational benefits through the Army College Fund.
- Provides for the expansion of the Junior ROTC program.
- Provides improvements in Army Continuing Education System with emphasis on increased tuition assistance.

Administration - Program 9 (mission). Program 9 finances the Department of the Army Headquarters, Personnel Administration, Public Affairs, Criminal Investigation and a variety of worldwide activities that are more effectively managed in a single account. Of the total request of $857 million, the net increase of $58 million consists of $41 million of program growth and $17 million of cost growth. Significant program highlights are:

- Modernize the Army's Automatic Data Processing (ADP) posture to include the continuation of the upgrade of the Army Headquarters support and the modernization of both the Military and Civilian Personnel Management and Information Systems.

  - Provide for the reimbursement to the Department of Labor for the Disability Compensation Program as required by PL 86-767.
  - Provides for the reimbursement to the U.S. Postal Service for the mail cost for the increases in postal rates and the positive accountability cost associated with installation of postal meters and permit mailing.
- Provides for productivity investment funding for all OMA projects that will amortize in four years or less.

Support to Other Nations - Program 10.
Program 10 provides funding and personnel to support Department of Defense obligations required by international agreements for which the Army has been designated Executive Agent and to further Army-to-Army cooperation with allied and friendly nations. Of the total request of $108 million, the net increase of $12 million consists of $-1 million in program growth and $13 million cost growth. The FY 1984 budget request provides for:

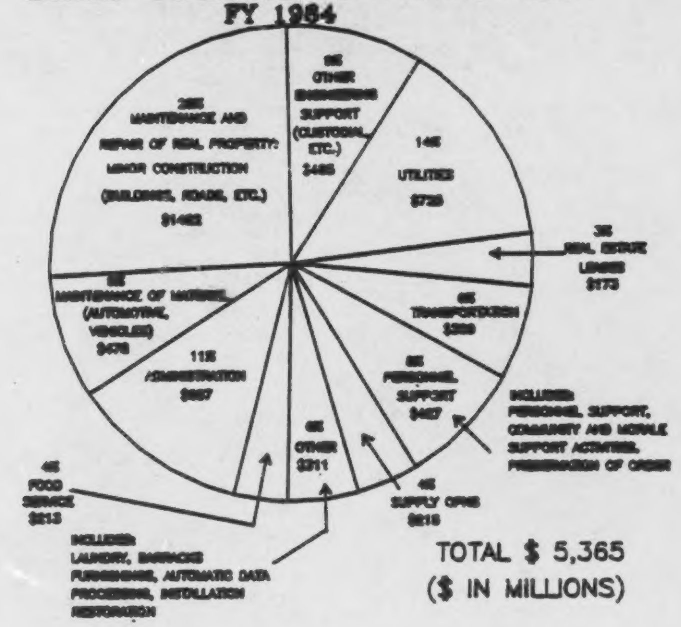
- US contribution to the NATO Military Budget.
- US Support to International Military Headquarters.
- Support of Army-to-Army cooperation programs.
- Support of Department of Defense directed missions in support of US national security interests.

Base Operations (-) Program 11.
Program 11 provides resources to support Base Operations (less real property maintenance activities) at all continental United States (CONUS) and overseas installations funded by the OMA Appropriation. Support includes: supply operations; maintenance of materiel; transportation services; laundry and dry cleaning operations; the Army Food Program; bachelor housing operations and furnishings; personnel, administration and data processing support; morale, welfare, recreation support; law enforcement; and the Real Estate Leasing Program. Of the total request of $2,733 million, the net increase of $376 million over the FY 1983 level consists of $240 million in program growth, and $136 million in cost growth. Significant highlights are:

- Supports the extension of Project VIABLE (Vertical Installation Automated Baseline), the replacement of obsolete ADP capability with modern State-of-the-Art technology.
- Provides for support of new systems scheduled for deployment.
- Provides for continuation and expansion of the Commercial Activities Program.
- Provides resources for the upgrade of tactical wheeled vehicles in Europe.
- Provides for additional civilian personnel spaces for the replacement of TDA military support personnel.
- Includes savings to accrue from the application of efficiency reviews.
- Expands support for programs that affect the quality of life of the soldier.

The next two charts show the distribution of the Army Base Operation Support by percentage and functional account.

OPERATION AND MAINTENANCE, ARMY
BASE OPERATIONS SUPPORT
FY 1984



OPERATION AND MAINTENANCE, ARMY
BASE OPERATIONS – FUNCTIONAL
($ IN MILLIONS)

			FY 82	FY 83	FY 84
BASE OPS	A	REAL ESTATE LEASES	0	149	173 1/
	B	SUPPLY OPERATIONS	209	205	218
	C	MAINTENANCE OF MATERIEL	329	384	478
	D	TRANSPORTATION SERVICES	270	278	308
	E	LAUNDRY AND DRY CLEANING SERVICES	28	33	33
	F	ARMY FOOD PROGRAM	170	180	213
	G	PERSONNEL SUPPORT	46	48	84
	H	BACHELOR HOUSING FURNISHINGS SUPPORT	94	64	58
	N	ADMINISTRATION	565	574	607
	P	DATA PROCESSING ACTIVITIES	114	138	174
	R	INSTALLATION RESTORATION	14	13	14
	S	MORALE WELFARE RECREATION (MWR) SUPPORT ACTIVITIES	202	183	229
	T	PRESERVATION OF ORDER	105	108	143
		SUB TOTALS	2,146	2,357	2,733
RPMA	J	OPERATION OF UTILITIES	688	678	725
	K	MAINTENANCE AND REPAIR OF REAL PROPERTY	1,333	1,097	1,343
	L	MINOR CONSTRUCTION	135	67	79
	M	OTHER ENGINEERING SUPPORT	487	434	485
		SUB TOTALS	2,643	2,276	2,632
		GRAND TOTALS	4,789	4,633	5,365

1/TRANSFERRED FROM PROGRAM 2 MISSION ACCOUNT

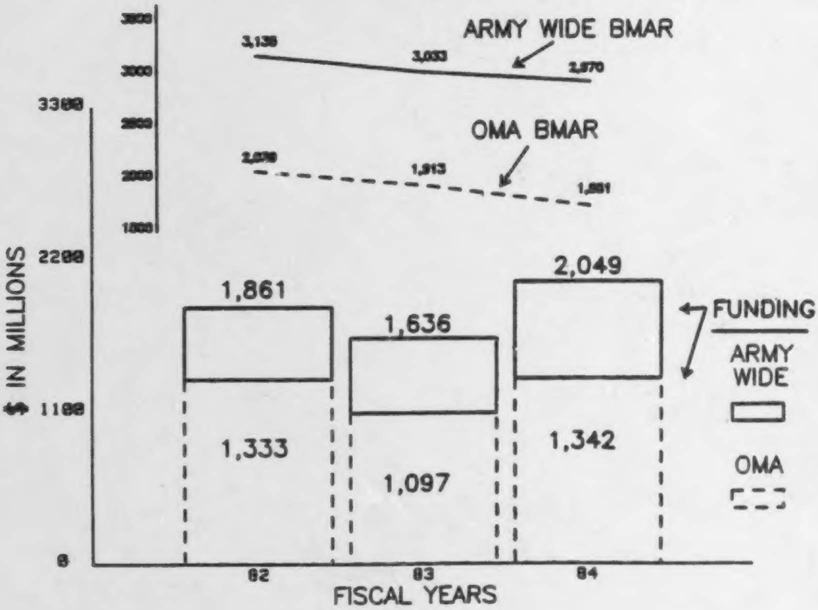
Base Operations (BASOPS): Real Property Maintenance Activities - Program 12. Real Property Maintenance supports facility engineers at military installations and activities around the world. These activities consist of maintenance and repair of real property facilities, minor construction under $200 thousand, operation of utilities, and other engineering support such as fire protection and prevention, pest control, refuse collection and disposal, custodial services, ice and snow removal, master planning, and more. This support is provided at 95 major installations in the U.S., 39 military communities in Europe (each consisting of several Kasernes), a Panama Defense Complex, and 152 separate installations and activities in the Pacific. 1/ In order to operate and maintain a very substantial investment in real property, the Army request for this program is $2,632 million in the OMA Appropriation, consisting of $172 million in cost growth and program growth of $185 million.

The following chart shows the funding levels in maintenance and repair of real property and the backlog of maintenance and repair (BMAR) projects not funded. With the OMA dollars being requested, the Army can meet two objectives:

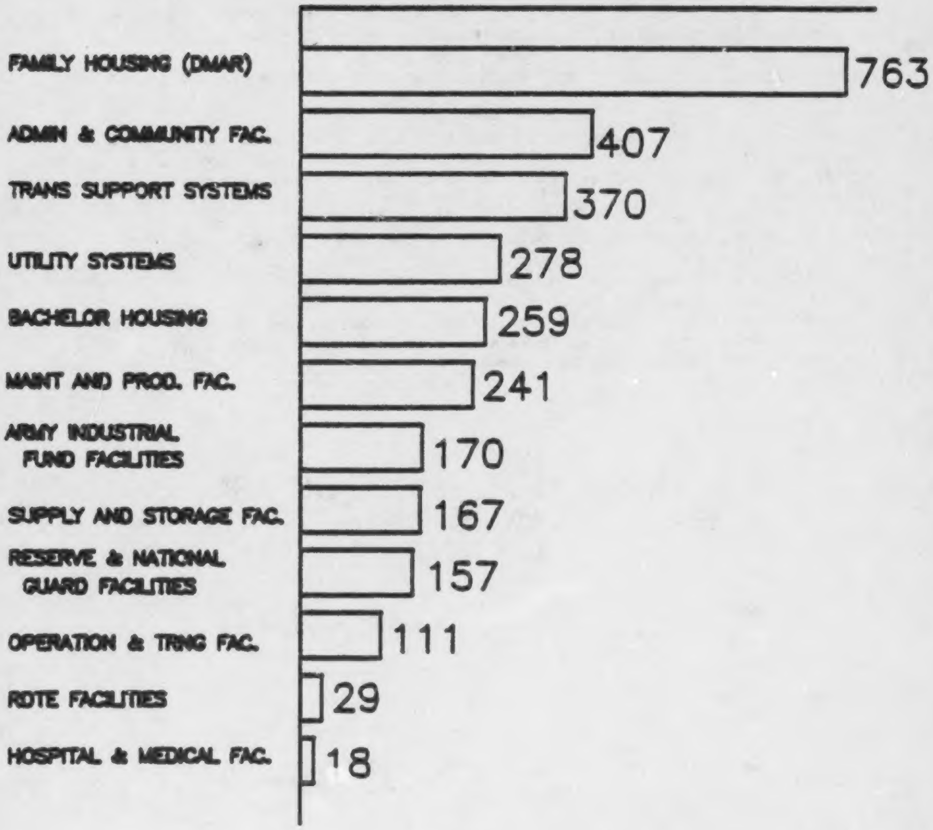
- o Reduce the BMAR in Europe with some growth elsewhere.
- o Fully finance the annual recurring requirements of all major commands.

1/ In addition, the Army National Guard and Army Reserve provide this type of support to their own facilities while some facilities are operated and maintained using Research and Development funds or Army Industrial Fund earnings.

ARMY WIDE BACKLOG OF MAINTENANCE AND REPAIR
($ IN MILLIONS)



COMPOSITION OF END FY 84
ARMY WIDE BACKLOG
($ IN MILLIONS)



OPERATION AND MAINTENANCE, ARMY NATIONAL GUARD (OMARNG)

The FY 1984 Operation and Maintenance, Army National Guard appropriation request of $1,135 million provides for the expenses of organizing, administering, training, equipping, and operating the Army National Guard. Also included are the pay and allowances for Army National Guard civilian employees.

OPERATION AND MAINTENANCE ARMY NATIONAL GUARD

($ IN MILLIONS)

	FISCAL YEARS		
	1982	1983	1984
TRAINING/OPERATIONS	143	161	162
DEPOT MAINTENANCE	56	56	55
LOGISTICAL SUPPORT	759	795	735
MEDICAL SUPPORT	7	8	9
BASE OPERATIONS	72	90	91
RECRUITING	10	13	13
MANAGEMENT SUPPORT	57	68	70
TOTAL *	$1,105	$1,191	$1,135

* TOTALS MAY NOT ADD DUE TO ROUNDING

Technician and civilian funding included in the above requirements supports a civilian end strength of 22,740 at a cost of $601.8 million or 53 percent of the total request. The FY 1984 OMARNG budget provides increased funding for training operations, real property maintenance activities, headquarters activities, recruiting support, and medical support. Logistical support operations depicts a negative program growth. However, funding of $4.2 million is available for the scheduled fielding of the Roland Battalion; $4.5 for the continued support of the M-1 Battalion fielded in FY 1983; and $17.9 for new equipment items scheduled in FY 1984 to include support costs for additional AH1S COBRA/TOW aircraft, improved TOW Vehicles and M198 Howitzers.

OPERATION AND MAINTENANCE, ARMY RESERVE (OMAR)

The FY 1984 Operation and Maintenance, Army Reserve appropriation request of $663 million supports Army Reserve strength projections; targets resources to improve the mobilization capability and combat readiness of early deploying/employing USAR units; and provides pay and allowances for Army Reserve civilian personnel.

OPERATION AND MAINTENANCE
ARMY RESERVE

($ IN MILLIONS)

	FISCAL YEARS		
	1982	1983	1984
TRAINING AND ORGANIZATION OF MISSION FORCES	411	438	386
DEPOT MAINTENANCE	8	8	9
BASE COMMUNICATIONS	12	12	15
BASE OPERATIONS	168	169	176
RECRUITING AND ADVERTISING	33	40	33
MANAGEMENT SUPPORT	34	38	44
TOTAL *	666	705	663

* TOTALS MAY NOT ADD DUE TO ROUNDING

The FY 1984 request includes initiatives to improve training; effect force structure changes; improve Army Reserve automation capabilities; and continue to reduce the equipment shortage.

PROCUREMENT
(TOA $ CURRENT BILLIONS)

FY 1981	FY 1982	FY 1983
$13.9	$15.7	$19.2

General

The Army's FY 1984 procurement request of $19.2 billion provides a $3.5 billion increase over the $15.7 billion requested in the revised FY 1983 submission. This represents a real program growth of $2.6 billion primarily by the maturation of our previously funded Research and Development efforts which began procurement in FY 1979, FY 1980, and FY 1981. The remaining increase is the result of cost growth. The following chart depicts the funding trend of the five procurement appropriations.

PROCUREMENT
($ IN MILLIONS)

APPROPRIATION	FISCAL YEARS 1982	1983	1984	1985
AIRCRAFT	1,966	2,487	3,472	3,708
MISSILES	2,131	2,267	3,089	3,919
WEAPONS AND TRACKED COMBAT VEHICLES	3,746	4,699	4,934	5,626
AMMUNITION	2,323	2,122	2,334	3,404
OTHER PROCUREMENT	3,707	4,108	5,363	7,763
NATIONAL GUARD EQUIPMENT*	50	0	0	0
TOTAL	13,923	15,683	19,192	24,420
SPECIAL DOD APPROPRIATIONS**		65		
(NATIONAL GUARD EQUIP)		(50)		
(ARMY RESERVE EQUIP)		(15)		

* FY 1982 SPECIAL ARMY APPROPRIATION DIRECTED BY CONGRESS.

** FY 1983 SPECIAL DOD APPROPRIATIONS DIRECTED BY CONGRESS.

AIRCRAFT PROCUREMENT, ARMY ($3,472.1 MILLION)

The FY 1984 aircraft request is distributed among the following four activities:

($ Millions)

Activity	FY 1982	FY 1983	FY 1984
Aircraft	1,138.3	1,506.9	1,944.7
Modification of Aircraft	451.5	380.4	633.3
Spares and Repair Parts	250.6	448.2	649.4
Support Equip and Facilities	125.6	151.6	244.7
TOTAL	1,966.0	2,487.1	3,472.1

FY 1984 Highlights of Aircraft Procurement are:

AIRCRAFT ($1,944.7 MILLION)

AH-64 APACHE ($1,297.5 Million). This request will procure 112 AH-65 APACHE attack helicopters and long leadtime items required to support the FY 1985 production. The APACHE is a twin-engine, two place fully integrated anti-armor weapon system capable of destroying tanks and other armored vehicles under day/night and adverse weather coditions.

UH-60A BLACKHAWK ($466.3 Million). This request will procure 84 UH-60A BLACKHAWK helicopters and provide advance procurement of long leadtime items and engines required to support the FY 1985 production.

RC-12D GUARDRAIL ($26.1 Million). $26.1 million in FY 1984 funds will procure a ground processing center for the third Improved GUARDRAIL V system.

EH-60A QUICKFIX ($154.8 Million). This request will procure 12 EH-60A QUICKFIX helicopters and provide for advance procurement of long leadtime engines and airframe components required to support the FY 1985 production.

MODIFICATION OF AIRCRAFT ($633.3 MILLION)

Aircraft modification will permit the upgrading of the Army's existing fleet, thereby complementing the acquisition program. $177.0 million is requested for modification line tooling and exercise of the first option to modify 16 OH-58A airframes to the OH-58D (AHIP) configuration and for ground support equipment and advance procurement for modification of airframes in FY 1985. The AHIP will provide commanders with a significantly improved scout helicopter to conduct command and control, reconnaissance, surveillance, security, and target acquisition/designation functions under day, night, and adverse weather conditions. $360.5 million is requested for continuation of the CH-47D modernization program and for fleet modifications to convert the T-55-L-11D engines to the T-55-L-712 configuration. The Army will continue the modernization of OV-1B MOHAWK aircraft to the standard OV-1D configuration.

SPARES AND REPAIR PARTS ($649.4 MILLION)

This request will provide $259.8 million to procure spares and repair parts to support initial fielding of new principal items or modifications of principal items. $389.6 million is requested for replenishment spares and war reserve spares. Replenishment spares support the system after initial fielding and provide spares and repair parts in concert with the Army's flying hour program.

SUPPORT EQUIPMENT AND FACILITIES ($244.7 MILLION)

$176.3 million is requested to procure Common Ground Equipment. In this category are one AH-IS Flight/Weapons Simulator, one CH-47D Flight Simulator, three UH-60 Flight Simulators, tools, shop sets, and airfield support equipment. In the Industrial Facilities program $30.2 million is requested for provision of industrial facilities, manufacturing methods and technology, and depot maintenance plant equipment.

MISSILE PROCUREMENT ARMY ($3,088.5 MILLION)

The FY 84 request is distributed among the following four activities:

	($ Million)		
Activity	FY 1982	FY 1983	FY 1984
Other Missiles	1,512.3	1,849.8	2,535.0
Modification of Missiles	298.0	91.9	123.3
Spare and Repair Parts	243.9	219.1	316.6
Support Equip. and Facilities	77.2	105.8	113.6
TOTAL*	2,131.3	2,266.6	3,088.5

* Totals may not add due to rounding

Highlights of missile procurement are:

OTHER MISSILES ($2,535.0 MILLION)

PATRIOT ($992.0 Million). Funding provides for the procurement of 525 missiles, 15 fire units, and other ground support equipment. PATRIOT is an improved system which will replace NIKE-HERCULES and some HAWK batteries and is specifically designed to defeat the advanced air threat of the 1980's and beyond.

STINGER ($137.8 Million). $137.8 million is requested for the procurement of 1,508 STINGER missiles in FY 1984. The STINGER is a manportable air defense missile system that provides self-defense to forward deployed, company size combat units.

MULTIPLE LAUNCH ROCKET SYSTEM (MLRS) ($418.0 Million). $418.0 million is requested to procure 36,000 rockets and associated ground support equipment in FY 1984. The MLRS is a 227mm diameter multiple launch rocket system with tracked self-propelled launcher/loader, disposable pods, and fire control equipment. Its mission is to neutralize or suppress enemy field artillery and air defense systems, and supplement cannon artillery when targets exceed capabilities during surge conditions.

MULTIPLE LAUNCH ROCKET SYSTEM (MLRS) ADVANCED PROCUREMENT ($114.1 Million). This request will procure advance materials in economic order quantities as part of a multiyear procurement acquisition strategy for MLRS.

LASER HELLFIRE SYSTEM ($238.8 Million). $238.8 Million is requested in FY 1984 to procure 5,351 HELLFIRE missiles and associated equipment. This will also buy 107 training missiles (inert missiles with live seekers for air crew training) and 315 dummy missiles (completely inert rounds used for ground crew training and aircraft weight and balance during flight). The purpose of the HELLFIRE missile system is to defeat the current and future armor threat at stand-off ranges. Mounted on the AH-64 helicopter, it will increase survivability and fire power. Laser Hellfire launchers are funded within the AH-64 Attack Helicopter budget line.

TOW MISSILES SYSTEM ($217.4 Million). This request will procure 18,000 TOW-2 missiles and ground support equipment. The TOW-2 system is an upgrade of the Basic TOW which was originally fielded in 1970. The TOW-2 missile is designed to defeat current and future enemy armored vehicles. $28.2 million advance procurement funding is included in this request to facilitate the procurement of long leadtime TOW-2 missile components in order that the TOW-2 missile production can be surged to 3,500 per month within 6 months of go-ahead.

PERSHING II ($407.7 Million) This request will procure 95 missiles and associated ground support equipment in FY 1984 and assumes an adequately funded FY 1983 supplemental. PERSHING II will replace the PERSHING Ia missile in Europe.

MISSILE MODIFICATION ($123.3 Million)

The FY 1984 request provides primarily for modification of four missile systems. The $72.5 million for TOW modification will greatly enhance the performance, lethality, and operation in an obscured environment. $31.2 million will be used to continue procurement modifications to the HAWK missile which will increase its capability in an electronics countermeasure environment. $12.4 million will be used to procure pneumatic system air compressors, rocket motor insulators and smokeless motors for CHAPARRAL, and $6.5 million will give the AN/TSQ-73 Command and Control system an increase in computer memory capacity. The remaining $.7 million is for miscellaneous modification.

SPARES AND REPAIR PARTS ($316.6 MILLION)

This request will provide $201.5 million to procure spares and repair parts to support initial fielding of new principal items or modifications of principal items. $115.1 million is requested for replenishment spares and war reserve spares. Replenishment spares support the system after initial fielding and provide spares and repair parts in concert with the Army's flying hour program.

SUPPORT EQUIPMENT AND FACILITIES ($113.6 Million)

This request will provide $12.5 million for procurement of Air Defense Targets. $61.6 million is requested for Production Base Support, including Provision of Industrial Facilities, Layaway, projects to improve Manufacturing Methods and Technology, Depot Maintenance Plant Equipment, and Productivity Enhancing Capital Investments, and $4.4 million for Items less than $900,000. $35.1 million is requested to procure test system/equipment to accomplish the quantity evaluation mission.

PROCUREMENT OF WEAPONS AND TRACKED COMBAT VEHICLES, ARMY ($4,934.3 Million)

The FY 1984 request is distributed between two activities: Activity 1, Tracked Combat Vehicles (TCV) and Activity 2, Weapons and Other Combat Vehicles (WOCV). Request by activity is as follows:

	($ Million)		
Activity	FY 1982	FY 1983	FY 1984
Tracked Combat Vehicles	3,078.6	3,907.5	4,034.4
Weapons and Other Combat Vehicles	667.2	791.0	900.0
TOTAL	3,745.8	4,698.5	4,934.4

Highlights of Tracked Combat Vehicles and Weapons and Other Combat Vehicles procurement are:

TRACKED COMBAT VEHICLES ($4,034.4 Million)

Tracked Combat Vehicles, both procurement and modification, constitute approximately 82 percent of the total FY 1984 Weapons and Tracked Combat Vehicles appropriation.

TANK, COMBAT FT, 105mm GUN, M1 ABRAMS (MYP) ($1,612.3). These funds are requested to procure 720 M1 tanks in FY 1984 and long-lead manufacturing items, components, and government furnished equipment to support the FY 1985 production of M1 tanks. The M1 Tank will replace the M60 series tank in selected units. It has significantly improved survivability over current tanks providing better armor protection and compartmentalization of ammunition and fuel. Its 1,500hp turbine engine and improved suspension system provide unprecedented mobility and stability as a weapons platform. The M1 counters the enemy threat and now has growth potential to be effective well into the 1990s.

BRADLEY FIGHTING VEHICLES ($795.8 Million). These funds are requested for procurement of 600 Infantry and Cavalry Fighting Vehicles (IFV/CFV) in FY 1984 and long-lead manufacturing items and components to support the FY 1985 production of 830 Infantry and Cavalry Fighting Vehicles. The IFV/CFV is designed to be compatible with the new M1 main battle tank and provide improved firepower, cross-country mobility, and ballistic protection to infantry squads and cavalry sections. The armament is designed to engage an array of enemy targets and will include a two-man turret employing a 25mm automatic cannon, the TOW antitank guided missile system, and a 7.62mm coaxial machine gun, all utilizing an integrated day/night thermal sight. Using the organic 5.56mm firing port weapon, the mounted infantry in the IFV will be able to deliver suppressive fires around the vehicle. Interior configuration varies in the CFV to allow for differences in crew size and stowage requirements.

TRAINING EQUIPMENT FOR M60A3 TANKS ($12.2 Million). These funds will procure unit conduct-of-fire trainers (U-COFTS) for gunner sustainment training at unit level and will result in substantial reductions in range usage, time, ammunition, and attendant costs.

LIGHT ARMORED VEHICLE (LAV-25) ($132.4 Million). These funds will procure 176 Light Armored Vehicles equipped with the M242 25mm cannon (LAV-25) in FY 84. FY 1984 is the third year of a five-year multiyear buy of LAV-25's to provide the light divisions with a lightweight, assault capable, direct fire support weapons systems.

RECOVERY VEHICLE, MEDIUM, FT. M88A1 ($142.3) Million. These funds will procure 180 M88A1's in FY 1984 to help meet the needs of Armor units for required tank recovery capability.

BRADLEY FIGHTING VEHICLE TRAINING DEVICES ($60.8 Million). These funds will procure Unit and Institutional Conduct of Fire Trainers for gunner sustainment training at unit level (U-COFT) and inital skill training at the training centers (I-COFT). These devices employ a Bradley gunner station mock-up and computer simulations to produce a wide variety of highly realistic battle scenarios. Although not a total substitute for actual firing, the Conduct of Fire Trainers will assist in acquiring and sustaining basic gunnery skills with substantial reductions in time, range usage, ammunition and attendant costs. These funds will also provide for the Army's total requirement for turret maintenance trainers.

FIELD ARTILLERY AMMUNITION SUPPORT VEHICLE (FAASV) ($103.4 Million). These funds are requested to continue procurement of the Field Artillery Ammunition Support (FAASV) for deployment in M109 155mm and M110 8" Self-Propelled Howitzer Battalions in Europe. The FY 1984 funds will procure 217 FAASV's.

HOWITZER, MED, SP, FT, M109A2 ($82.1 Million). These funds will procure 112 M109A2's in FY 1984. This is a continued procurement of the M109A2 Howitzer which is a product-improved version of the basic M109 self-propelled 155mm Howitzer that was fielded in 1963. The gun howitzer assembly is mounted on a fully-tracked chassis which is propelled by a 405hp diesel engine. The howitzer can fire to a range of 24km with a rocket-assisted projectile and is capable of delivering a nuclear round. The M109A2 provides close indirect fire support for maneuver elements of heavy brigades/divisions.

CARRIER COMMAND POST, LIGHT, FT, M577A2 ($130.0 Million). These funds will procure 652 M577A2 Command Post Carriers. The M577A2 provides mobility and light armor protection for field commanders. It functions as transporter and working shelter for command posts, field operation centers, and fire direction centers. Carriers are needed to fill significant shortages in the Army fleet and to provide equipment needed for fielding the Multiple Launch Rocket Systems (MLRS) and for reorganization of the field artillery into 3 x 8 battalions.

M1 SERIES, TANK TRAINING DEVICES ($31.6 Million). These funds will procure Unit and Institutional Conduct-of-Fire Trainers for gunner sustainment training at unit level (U-COFT) and initial skill training at the training centers (I-COFT). These devices employ an M1 gunner station mock-up and computer simulations to produce a wide variety of highly realistic battle scenarios. Although not a total substitute for actual firing, the conduct of fire trainers will assist in acquiring and sustaining basic gunnery skills with substantial reductions in time, usage, ammunition, and attendant costs. Funds requested will also provide the Army's total requirement for the Turret Maintenance Trainers to provide initial fault isolation and repair procedures training for M1 turret mechanics.

MODIFICATION OF TRACKED COMBAT VEHICLES ($385.5 Million). These funds will continue the product improvement programs for the M113 family of vehicles ($46.6 Million) and M110 series 8-inch self-propelled Howitzer ($6.1 Million). Improved suspension and cooling will be added to overhauled M113 family of vehicles to increase cross-country mobility and RAM characteristics. Improvements to the M110 will include gun tube liners and modification kits to mount the battery computer system hardware. $195.1 million is included to convert M60A1 tanks to M60A3's. $106.1 million is included for the Fire Support Team Vehicle (FISTV). $6.0 million is included for Reliability and Maintainability (RAM) and NBC survivability improvements for the M109 Howitzer. $25.6 million is included for procurement of modification kits to convert M60A2 chassis to M60A1 AVLB chassis and to procure class 60 Armored Vehicle Launch Bridges.

SPARES AND REPAIR PARTS - TRACKED COMBAT VEHICLES ($406.3 Million). The request will procure spares and repair parts for Tracked Combat Vehicles. Of this, $251.5 million will procure initial spares and repair parts required for fielding new systems being procured (i.e., M1 Tank, BFVS, FISTV, FAASV, and LAV-25). $154.8 million will procure replenishment and war reserve spares and repair parts for vehicles currently in the Army inventory.

PRODUCTION BASE SUPPORT - TRACKED COMBAT VEHICLES ($65.6 Million). The FY 1984 request of $65.6 million for tracked combat vehicles production base support includes $45.9 million for rehabilitation/replacement of current production facilities; $3.9 million for layaway of production facilities; $4.0 million for various projects to improve manufacturing methods and techniques; and $11.8 million to procurement equipment required to establish depot repair capability for systems being fielded.

WEAPONS AND OTHER COMBAT VEHICLES ($900.0 Million).

SGT. YORK (DIVAD) GUN ($580.2 Million). Initial procurement of 50 guns began in FY 1982 followed by a procurement of 96 guns in FY 1983. Sgt. York will provide an all-weather air defense capability to forward maneuver elements of the field Army. It will be deployed in armor and mechanized divisions, and will replace the self-propelled VULCAN. The request includes $38.7 million advanced procurement for FY 1985 and $541.5 million for procurement of 130 gun systems in FY 1984.

ARMORED MACHINE GUN, M240 ($11.6 Million). This request continues the procurement of the weapon which is used on a variety of vehicles, including the M1 Tank, the M60 series Tank, and the BFVS. 2,250 weapons will be procured.

SQUAD AUTOMATIC WEAPON (SAW) ($6.7 Million). This request is for first year CONUS procurement of this individual weapon which provides improved firepower, accuracy, and range on a rifle squad. 2,000 weapons will be procured.

VEHICLE RAPID FIRE WEAPON SYSTEM ($42.1 Million). The Vehicle Rapid Fire Weapon System is a 25mm automatic cannon with dual feed that allows immediate selection of either the High Explosive Incendiary or Armor Piercing Discarding Saboy ammunition. This weapon is the primary weapon system for the Bradley Fighting Vehicle System. The FY 1984 request will procure 630 weapons.

MK19-3 40mm AUTOMATIC GRENADE LAUNCHER ($2.5 Million). The MK19-3 is a 40mm grenade launcher that will meet the Army's need for a weapon to deliver accurate, intense, decisive firepower against enemy personnel and light armor vehicles. This procurement will buy 72 weapons.

9mm PERSONNEL DEFENSE WEAPON (PDW) ($3.9 Million). The requested procurement of the 9mm PDW will standardize all of NATO on 9mm hand-guns. The FY 1984 request will procure 11,500 9mm handguns. This is the first year of a ten-year planned Army procurment.

M26 TANK MUZZLE BORESIGHT DEVICE ($4.4 Million). These funds will procure 1,750 M26's. The M26 is an optical device and a non-development item which fits into the main gun tube of all Army tanks (M48A5, M60 Series and M1) and allows an accurate boresight to be obtained without firing rounds. The use of this device will improve tank unit readiness and many rounds of ammunition will be saved.

MORTAR, I-81mm, XM252 ($1.7 Million). The FY 1984 request procures 30 81mm mortars. The XM252 will provide an improved 81mm mortar for organic indirect fire support within the maneuver battalion.

LAUNCHER, SMOKE GRENADE ($3.0 Million). These funds will continue procurement of protective smoke systems for combat vehicles. The launcher provides near instantaneous smoke protection and is a defensive aid against antitank missiles.

MACHINE GUN, 7.62mm M60 ($1.1 Million). These funds will procure 368 machine guns in FY 1984 as part of a host nation support program with the Federal Republic of Germany.

PRODUCT IMPROVED VULCAN AIR DEFENSE SYSTEM (PIVADS) ($9.3 Million). These funds are requested for product improvements to the VULCAN Air Defense Gun. These improvements are designed to upgrade reliability, operability and maintainability. The towed version of the VULCAN will serve as an interim lightweight air defense system, while the self-propelled configuration is scheduled to be furnished to National Guard and Reserve units when it is no longer needed with active forces after replacement by the Sergeant York DIVAD Gun.

PRODUCTION BASE SUPPORT WEAPONS AND OTHER VEHICLES ($111.2 Million). The FY 1984 request for Weapons and Other Combat Vehicle production base support includes $78.3 million for rehabilitation and replacement of current production facilities, including continuation of the modernization of Watervliet and Rock Island Arsenals; $1.6 Million to layaway facilities; and $10.5 million for projects to improve Manufacturing Methods for Technology; $20.8 million will procure equipment required to establish depot repair capability for systems being fielded.

SPARES AND REPAIR PARTS - WEAPONS AND OTHER COMBAT VEHICLES ($118.9 Million). Of the total, $90.9 million will procure initial spares and repair parts and the balance of $28.0 million will procure replenishment and war reserve spare and repair parts for vehicles currently in the Army inventory.

PROCUREMENT OF AMMUNITION, ARMY ($2,334.2 Million)

The FY 1984 request is divided into two activities:

ACTIVITY	FY 1982	FY 1983	FY 1984
	($ Million)		
Ammunition	2,020.9	1,717.5	2,056.9
Ammunition Production Base Support	301.7	404.5	277.3
TOTAL	2,322.6	2,122.0	2,334.2

AMMUNITION ($2,056.9 Million)

Four categories of ammunition account for 62 percent of the request. They consist of tank ammunition, artillery ammunition, fuzes and charges.

TANK AMMUNITION ($225.7 Million). Ammunition for the Army's entire family of tanks is included in this request. This ammunition is being procured against the training and war reserve stockage requirements.

ARTILLERY AMMUNITION ($830.2 Million). Funding is requested to procure various types of 155mm and 8-inch artillery ammunition, mainly consisting of new improved conventional munitions, rocket-assisted projectiles, and artillery-delivered mines. Funding is also included for procurement of components of the binary chemical round. $75 million is to procure 1,415 155mm COPPERHEAD projectiles in support of war reserve requirements.

FUZES ($95.8 Million). Funding is requested to procure Point Detonating, Mechanical Time and Proximity fuzes which are required in support of artillery projectile programs.

CHARGES ($117.9 Million). Funding is requested to procure 155mm and 8-inch extended range propelling charges which are required in support of artillery projectile programs.

The remaining 38 percent of the request ($787.3 million) consists of the following categories:

Type	($ Million)
Small Arms Ammunition	407.6*
Mortar Ammunition	124.9
Nuclear Materiel	112.0
Other	142.8
TOTAL	787.3

* $1.2 million is included for 9mm ball cartridges for war reserve and training with the 9mm hand gun.

AMMUNITION PRODUCTION BASE SUPPORT ($277.3 Million)

The FY 1984 request of $277.3 million for ammunition product base includes $255.6 million for modernization and expansion projects necessary to produce new modernized munitions.

OTHER PROCUREMENT, ARMY ($4,952.3 Million)

The FY 1984 request is distributed among the following activities:

	($ Million)		
Activity	FY 1982	FY 1983	FY 1984
Tactical and Support Vehicles	1,015.9	1,229.6	1,148.1
Communications & Electrial Equipment	1,607.8	2,044.0	2,781.2
Other Support Equipment	1,083.6	834.7	1,433.6
TOTAL	3,707.3	4,108.3	5,362.9

TACTICAL AND SUPPORT VEHICLES ($1,148.1 Million)

The request is for the tactical and support wheeled vehicles program to fill some of the shortages in troop units, support the fielding of new systems and replace overage/overmileage equipment. The major equipment categories are:

TACTICAL VEHICLES ($981.9 Million). The tactical wheeled vehicle fleet is critical to the Army's modernization effort and to support the fielding of new Air Defense, Fire Support, Command and Control and Target Acquisition systems. The request includes $373.2M for 4,499 5-ton trucks to fill troop unit shortages and support systems such as TACFIRE, PATRIOT, PERSHING II, Sgt. York Gun, PLRS, and numerous command and control systems. Also included is $209.6M for 1,316 10-ton trucks to fill some unit shortages and to support such systems as MLRS, PERSHING II, PATRIOT, and Sgt. York Gun. The request for $135.7M for 4,218 HMMWV's is required to fill TOW Missile requirements and to support the fielding of new systems such as Sgt. York Gun, TACFIRE, FIREFINDER, PATRIOT, and SOTAS. The CUCV funding is for 15,346 vehicles at $191.7M to support the fielding of new systems such as PATRIOT, MLRS, TACFIRE, AN/TLQ-115, and the FVS and allows the Army to accomplish commercialization of 20 percent of the jeep fleet begun in 1982 as directed by Congress.

NON-TACTICAL VEHICLES ($57.4 Million). Requested funding is for the replacement of overage and overmileage vehicles and to fill some shortages.

SUPPORT EQUIPMENT AND FACILITIES ($108.8 Million). The request includes $102.5 million for initial and replenishment spares to support newly fielded and existing equipment.

COMMUNICATIONS AND ELECTRONICS ($2,781.2 Million)

The $2,781.2 million requested for communications and electronics equipment constitutes approximately 50 percent of the Other Procurement, Army appropriation request. The major equipment categories consist of the following:

JOINT TACTICAL COMMUNICATIONS PROGRAM (TRI-TAC) ($373.7 Million). The TRI-TAC program consists of a multitude of components such as switches, multiplexers, maintenance shelters and management/control modes of varying complexity which will be used by tactical common user and command and control voice, record and data subscribers.

COMBAT SUPPORT COMMUNICATIONS ($185.0 Million). This request will procure various communications electronics equipment to be used in the combat support role. Of the request, $50.8 million will procure the SINCGARS radios; $26.0 million will procure the AN/UGC-74 Teletypewriter Terminal; and $13.2 million will procure the Steerable Null Antenna Processor, CP-1380.

SATELLITE COMMUNICATIONS - GROUND ENVIRONMENT ($232.5 Million). The request contains $189.5 million for the Defense Satellite Communications System (DSCS) global strategic and tactical communications equipment to include DCSC digital equipment, interconnect facility, and medium satellite terminal. Additionally, the request will procure a modification-in-service program for satellite communication equipment currently deployed ($43 million).

AUTOMATIC DATA PROCESSING EQUIPMENT (ADPE) ($214.1 Million). The FY 1984 request contains $52.0 million for the Decentralized Automatic Service Support System (Model B): $34.5 million for the Vertical Installation Automated Baseline (VIABLE) program; $29.4 million for the procurement of the Battery Computer System; $16.8 million for the Maneuver Control System; and $36.3 million will procure automatic data processing equipment for nontactical management information systems.

TACTICAL ELECTRONICS ($278.8 Million). The FY 1984 request will provide the various pieces of tactical electronics equipment. $19.3 million will procure the Meteorological Data System; $46.8 million is budgeted for the Ground Laser Location Designator (GLLD): $10.1 million will procure the Hand Held Laser Rangefinder (AN/GVS-5): and $71.6 million will procure various night vision devices (AN/TAS-4, AN/TAS-5, AN/PVS-5, and AN/PVS-7). $31.3 million will provide for the modification and upgrade of tactical electronics equipment currently deployed.

COMMUNICATIONS SECURITY (COMSEC) ($199.5 Million). This request provides for the necessary COMSEC devices needed to provide secure transmission links. Major items under this program include: ($10.9 million) Berdan KGV-9; Dedicated Loop Encryption Device, KG-84 ($15.6 million); Digital Subscriber Voice TSEC/KY-68 ($22.8 million): KN-2 Mabrey ($19.2 million); Speech Secure Equipment, TSEC/KY-57 ($49.6 million); and Speech Secure Equipment, TSEC/KY-65 ($10.2 Million).

SUPPORT EQUIPMENT AND FACILITIES ($735.9 Million). Request contains $19.6 million for Production Base Support projects; $294.4 million for initial provisioning spare and repair parts supporting new equipment purchase; $102.0 million to provide replenishment spare and repair parts to support previously fielded C-E equipment; and $28.2 million for war reserve spares and repair parts.

OTHER SUPPORT EQUIPMENT ($1,433.6 Million)

The major categories of equipment contained in this request are:

CHEMICAL DEFENSE EQUIPMENT ($61.0 Million). Requested funds provide for procurement of chemical agent detectors and alarms, decontamination equipment, masks and other protective equipment.

BRIDGING AND ENGINEERING/NONCONSTRUCTION EQUIPMENT ($105.9 Million). These funds are requested to procure bridging equipment and other engineer equipment used for application other than construction. Included are ribbon bridge equipment, the Ground Emplacement Mine Scattering System (GEMSS), Mine Clearing Roller, topographic support and position/azimuth determining systems and the M9 Armored Combat Earthmover.

PETROLEUM EQUIPMENT ($47.8 Million). Funds are requested to continue procurement of equipment for transport, storage, and distribution of fuels including collapsible tanks, hoseline systems, and tank and pump units. The request also provides for procurement of petroleum pipeline and storage equipment for operational project stock to support the Rapid Deployment Force (RDF).

MEDICAL EQUIPMENT ($151.6 Million). The requested funds are for replacement and modernization of existing medical equipment in TDA hospitals throughout the Army and to equip new facilities being constructed. Also provides for the acquisition of Combat Zone Hospital components.

CONSTRUCTION EQUIPMENT ($281.4 Million). Funds are requested to continue the Construction Standardization program. This program achieves standardization of high-density combat essential construction equipment through multiyear contracting. Equipment procured will replace old, obsolete, nonsupportable equipment currently in the inventory. Items to be procured include graders, scrapers, scoop loaders, medium duty crawler tractors, cranes and the Small Emplacement Excavator (SEE).

RAIL, FLOATING AND CONTAINERIZATION EQUIPMENT ($81.7 Million). Equipment to be procured includes Landing Craft, Utility (LCU); Logistic Support Vessels (LSV); 140-ton railway flat cars; and shopping containers.

GENERATORS AND ASSOCIATED EQUIPMENT ($101.6 Million). This request funds procurement of 15 different generator sets required to support fielding of new systems to replace over-age generators presently in the field.

MATERIALS HANDLING EQUIPMENT ($73.8 Million). Funds are requested to procure five different fork lifts necessary to support ammunition and other materials handling requirements.

OTHER SUPPORT EQUIPMENT ($387.7 Million). The program provides for procurement of initial and replenishment spares, Base Level Commercial Equipment (BCE), special equipment for user testing and Non-System Training Devices and funds the Production Enhancing Capital Investment Program, Quick Return on Investment Program, Production Base Support, Manufacturing Technology Program, Military Adaptation of Commercial Items (MACI), and Host Nation Support - Europe.

COMBAT SERVICE SUPPORT, WATER SUPPLY AND MAINTENANCE EQUIPMENT ($141.1 Million). This request for funds is to procure air conditioners, space heaters, air compressors, firetrucks, printing equipment, water support equipment for the RDF, hydraulic tool repair outfits, and shop equipment sets.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(TOA $ CURRENT BILLIONS)

FY 1982	FY 1983	FY 1984
$3.6	$3.9	$4.8

RESEARCH, DEVELOPMENT, TEST AND EVALUATION

The $4.8 billion requested in FY 1984 to conduct Army research and development activities constitutes a $907 million increase over the FY 1983 funding level of which $732 million will afford the Army real program growth. The following chart depicts Research, Development, Test and Evaluation (RDT&E) by budget activity:

RESEARCH, DEVELOPMENT, TEST & EVALUATION, ARMY TOTALS BY BUDGET ACTIVITY

($ IN MILLIONS)

	FISCAL YEARS		
	1982	1983	1984
TECHNOLOGY BASE	603	664	736
ADVANCED TECHNOLOGY DEVELOPMENT	200	258	419
STRATEGIC PROGRAMS	462	569	763
TACTICAL PROGRAMS	1,569	1,512	1,937
INTELLIGENCE & COMMUNICATION	55	76	89
DEFENSE WIDE MISSION SUPPORT	731	805	848
TOTAL PROGRAM *	3,620	3,885	4,792

* TOTALS MAY NOT ADD DUE TO ROUNDING

The detailed descriptions of each program in RDT&E, which are necessary for a complete analysis of the appropriation, are contained in the Army's RDTE Descriptive Summaries, which have been provided separately. The following is a general discussion by Budget Activity.

The Technology Base, performed by Army laboratories and through contracts with universities and industry produces new ideas and concepts which allow us to transfer technological thrusts into future systems to fight our kind of battle. This aggressive science and technology program develops new capabilities, solutions for identified Army problems, and the base for subsequent development programs. The funds requested for the Technology Base in FY 1984 represent real growth of 5% in Reserach (Program Category 6.1) and 7% in Exploratory Development (Program Category 6.2).

The increase in Advanced Technology Development represents the Army's investment in several technological concepts which have matured to the point of combat hardware demonstration. These include High Energy Lasers, fiber optics missile guidance, and support of the Army Development and Employment Activity (formerly High Technology Test Bed). Tactical programs, which include the heart of the Army's Equipment Modernization program, constitute about 40% of the FY 1984 RDTE funds requested. The small amount of growth in Defensewide Mission Support funds the Army's efforts to improve instrumentation at test ranges and continues to fund a five-year productivity improvement plan.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY TOTALS BY PROGRAM CATEGORIES

($ IN MILLIONS)

CATEGORY	FISCAL YEARS		
	1982	1983	1984
BASIC RESEARCH (6.1)	179	202	221
EXPLORATORY DEVELOPMENT (6.2)	423	462	514
ADVANCED DEVELOPMENT (6.3)	919	1,144	1,710
ENGINEERING DEVELOPMENT (6.4)	1,175	990	1,094
MANAGEMENT AND SUPPORT (6.5) (TESTING & RANGE OPERATION)	682	795	830
OPERATIONAL SYSTEMS DEVELOPMENT (6.7) (PIPs)	241	292	423

The Ballistic Missile Defense (BMD) Program is the predominant element in the Army's Strategic Program. Operating within the ABM Treaty, it is a broad-based research and development effort designed to advance BMD technology and to develop and demonstrate components and subsystems which will provide the basis for evolutionary systems in the future. The FY 1984 BMD submission supports expanded efforts in optical tracking, nonnuclear kill techniques, and both endo - and exoatmospheric defense capabilties. Work will also continue on development of critical components for the SENTRY system and a system option will be maintained as a hedge against a near term deployment requirement.

MILITARY CONSTRUCTION
(TOA $ CURRENT MILLIONS)

FY 1982	FY 1983	FY 1984
$951	$930	$1,375

MILITARY CONSTRUCTION, ARMY

The Military Construction, Army, FY 1984 TOA request of $1,375 million contains $1,154.5 million for major construction, $32 million for unspecified minor construction, $188.5 million for planning and design, and access roads. Approximately 34% is for construction overseas, primarily in Germany and Korea, and to support the Rapid Deployment Force. Construction in the United States accounts for approximately 50% of the request. The remaining 16% is for planning and design, unspecified minor construction and access roads.

The FY 1984 budget emphasizes:

- Increasing the combat readiness of units.
- Improving soldier quality of life.
- Fielding of new weapons systems with barracks, maintenance facilities and ranges.
- Upgrading facilities in Korea.

- Replacing a portion of the WWII facilities, upgrading production, storage, warehouse and utilities facilities.

- Upgrading medical facilities.

- Providing facilities for the Rapid Deployment Force.

The following depicts the three-year funding trend by facility category:

MILITARY CONSTRUCTION, ARMY (MCA)
($ IN MILLIONS)

	FISCAL YEARS		
FACILITY CATEGORY	1982	1983	1984
OPERATIONS AND TRAINING	68	132	254
MAINTENANCE AND PRODUCTION	162	248	331
R & D	29	5	35
SUPPLY AND ADMINISTRATION	38	7	67
HOSPITAL AND MEDICAL	112	53	25
TROOP HOUSING/COMMUNITY SUPPORT	209	206	289
UTILITIES/LAND IMPROVEMENTS	122	104	133
REAL ESTATE	28	0	20
UNSPEC MINOR CONST/PLANNING DESIGN/OTHER	183	175	221
TOTAL	951	930	1,375
MCA PROGRAM, BY AREA			
UNITED STATES	407	449	697
EUROPE	290	262	337
MID-EAST	7	0	41
PACIFIC	69	63	67
OTHER	178	156	233
TOTAL	951	930	1,375

Highlights of the FY 1984 MCA budget are:

Operational and Training Faciliities. Includes $82 million for operational facilities and $172 million for training facilities. Provides a range of operational facilities and future design for support of the Rapid Deployment Force, unit operational facilities, and aviation facilities. The training facilities include range improvements, flight simulators, instructional facilities, and facilities required for the transition and training related to new weapon systems.

Maintenance and Production Facilities. Includes $331 million to support such programs as upgrade of unit and installation level maintenance facilities, manufacturing facilities modernization, and the facilities to support new weapon systems.

Research, Development, Test and Evaluation Facilities. Includes $35 million to improve facilities to advance military technology to satisfy future operational requirements: to enhance human effectiveness; and to effect cost savings or cost avoidance through greater efficiency.

Supply Facilities. Includes $58 million to improve, expand, modernize and increse the operational efficiency of supply facilities worldwide.

Medical Facilities. Includes $25 million to provide high quality health care in medical facilities that meet current accreditation standards and are efficient to operate in an environment conducive to more effective health care. Includes a project for $22 million for the renovation of the US Army Hospital in Augsburg, Germany.

Administrative Facilities. Includes $9 million to provide adequate permanent faciliites to perform administrative and headquarters functions in support of assigned missions.

Unaccompanied Personnel Housing and Community Facilities. Includes $215 million for unaccompanied housing and supporting facilities and $74 millon for community facilities. Unaccompanied housing facilities will upgrade the quality of life, support the deployment of additional weapon systems to Europe, and upgrade living standards at remote sites. Community facilities include such projects as physical fitness centers, community centers, and facilities to provide the soldiers with adequate community and recreation facilities for their off-duty time.

Utilities and Real Estate Includes $65 million in facilities to ensure adequate and dependable supply and distribution of utilities, $22 million for OSHA projects, $9 million for pollution abatement projects, $37 million for energy conservation investment program projects and land acquisition at West Point, and $20 million for Real Estate.

MILITARY CONSTRUCTION, ARMY NATIONAL GUARD (MCARNG)

The table below displays the MCARNG appropriation by major category.

Military Construction, Army National Guard
(TOA in $ Millions)

	FY 1982	FY 1983	FY 1984
Armory	$26	$27	$22
Non-Armory	35	17	23
Minor Construction	4	8	8
Planning and Design	3	3	3
TOTAL*	$68	$55	$55

* Totals may not add due to rounding

The FY 1984 request for Army National Guard Construction provides funding for 40 major projects. Included in the major projects are 25 armories, two aviation facilities, four training facilities, six vehicle maintenance facilities, two United States Property and Fiscal Offices and one logistical facility.

The FY 1984 Army National Guard Military Construction Program addresses projects required for modernizing or replacing inadequate facilities for home station training and equipment maintenance and support. Even though prior year programs were successful in constraining the rapid growth in the construction backlog, inflation and other program adjustments have increased the backlog dollar value estimate at the end of FY 1984 to $825 million. Adjustments to the program include expanded minor construction needs to provide facilities for weapons training and storage of equipment and supplies required to attain assigned pre-mobilization readiness postures.

MILITARY CONSTRUCTION, ARMY RESERVE (MCAR)

The table below displays the MCAR appropriation by major category.

Military Construction, Army Reserve
(TOA in $ Millions)

	FY 1982	FY 1983	FY 1984
Major Construction	$54.9	$28.5	$40.2
Minor Construction	3.8	4.7	4.6
Planning and Design	6.0	8.6	7.9
TOTAL	$64.7	$41.8	$52.7

The FY 1984 MCAR request provides funding for major projects, minor construction and design. Included in the major projects are:

7 New Centers
1 Maintenance Facilities
10 Expansion/modernization of existing facilities

The projected USAR construction backlog at the beginning of the FY 1984 remains high at $1,085 million.

ARMY FAMILY HOUSING

General

In FY 1984, Army Family Housing budget represents the Army's commitment to improve the living conditions of our soldiers and their families throughout the world. The Army's Family Housing budget is shown in this chart:

ARMY FAMILY HOUSING
($ IN MILLIONS)

	FISCAL YEARS		
	1982	1983	1984
NEW CONSTRUCTION	$80	$21	$71
NUMBER OF UNITS	(712)	(209)	(759)
IMPROVEMENTS	$38	$102	$109
OTHER CONSTRUCTION	$7	$5	$7
DEBT PAYMENT	$6	$6	$3
LEASING	$80	$73	$87
NUMBER OF UNITS	(14,048)	(18,880)	(20,608)
DOMESTIC	($3)	($2)	($0)
NUMBER OF UNITS	(1,034)	(409)	(0)
FOREIGN	($77)	($71)	($87)
NUMBER OF UNITS (EUROPE)	(11,627)	(16,189)	(18,197)
NUMBER OF UNITS (OTHER)	(1,387)	(2,282)	(2,411)
OPERATION AND MAINTENANCE	$708	$770	$964
(YEAR END MAINTENANCE BACKLOG)	($747)	($763)	($763)
TOTAL	[illegible]	$977	$1,241

The FY 1984 Army Family Housing budget provides funds for: (1) the cost of ownership, i.e., the cost to operate and maintain the current family housing inventory ($1,012 million); and (2) program initiatives ($229 million).

The cost of ownership is required to operate and maintain the almost 172,000 family housing units in the Army inventory. This includes some 12,000 units transferred from the Departments of the Navy and Air Force in conjunction with the consolidation of all family housing on Oahu under Army management.

The resources requested will also provide for new construction at the following locations:

LOCATION	UNITS
Bethel, AK	2
Fort Greely, AK	38
Nome, AK	2
Kotzebue, AK	2
Fort Stewart, GA	244
Fort Polk, LA	200
Bayreuth, GE	13
Kitzingen, GE	103
Wildflecken, GE	153
Vicenza, IT	2
Aliamanu, HI	Community Center, (Phase II)*

* Phase I approved in FY 1983.

The request will also provide a program to upgrade the current inventory, $82 million, and provide Energy Conservation Investment Program projects, $27 million.

Additionally, the budget requests authorization for 20,608 leases, all of which will support the needs of forward deployed soldiers and their families.

ARMY STOCK FUND

The Army Stock Fund basic funded level for FY 1983 is $409 million. Stock fund war reserves ($255 million) are inventories of secondary items procured to satisfy wartime requirements from the time a conflict begins until the production base can directly satisfy consumption demands. These stock fund war reserve items are critical for support of the individual soldier as well as for major weapons systems. Peacetime stock fund inventories ($154 million) are procured to provide repair parts needed to support weapons systems which will be introduced into the inventory in the near future as we modernize and transition to the Army of tomorrow.

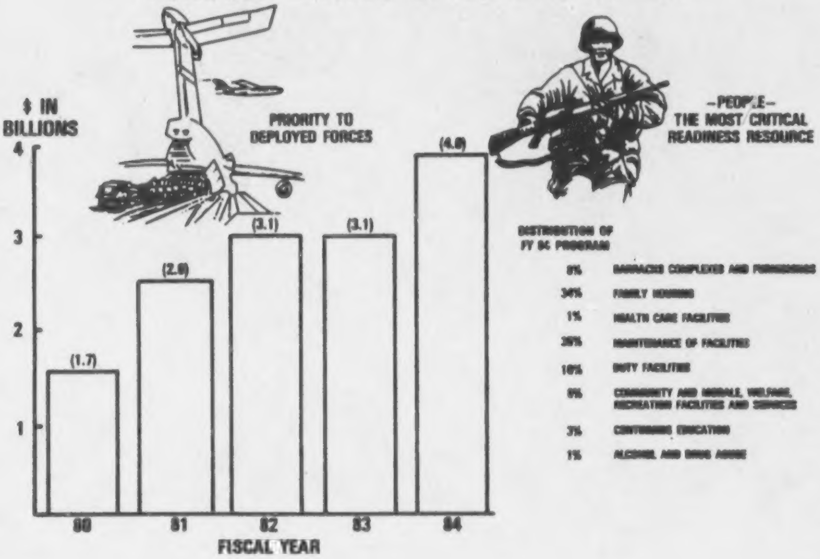
V. SPECIAL INTEREST TOPICS

Quality of Life (QOL) Programs

A major objective of the FY 1984 budget request is continuation of the effort to improve the quality of life of soldiers and their families. Quality of life issues have a direct bearing on readiness and on the commitment of soldiers to an Army career. These issues include adequacy of housing, for both unaccompanied personnel and those with families; new construction and proper maintenance and repair of facilities; satisfaction of education, religious, and family needs; and provision of necessary community and morale, welfare, and recreation services.

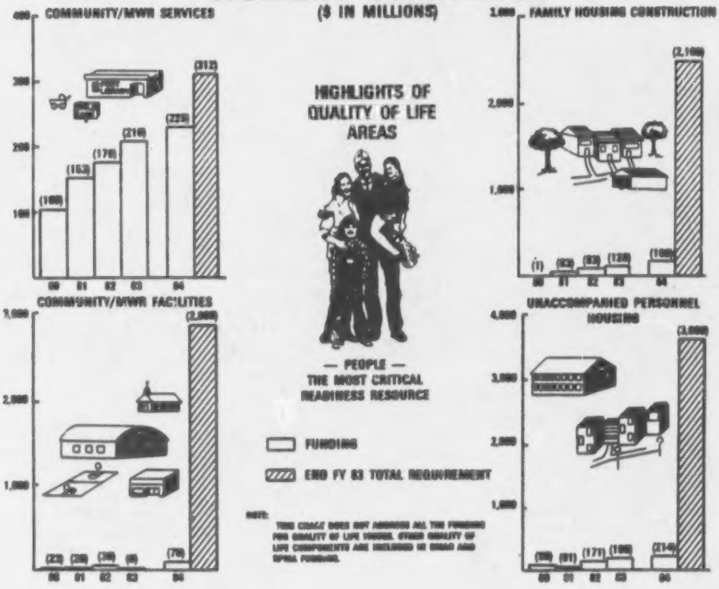
The following chart depicts past funding and the FY 1984 budget request for those programs that comprise the Army Quality of Life (QOL) Program. Considering the magnitude of the backlog of construction and maintenance of facilities and other unfinanced requirements, the increase in the total QOL Program from FY 1983 to FY 1984 is modest.

FUNDING STATUS OF QUALITY OF LIFE



The next chart highlights those QOL programs that most directly affect the living conditions of the soldier and his family. Total requirements in these areas are large; however, the FY 1984 budget represents our continued effort to reduce the shortfall.

IMPROVING SOLDIER'S LIVING AND WORKING CONDITIONS



The Army's strength has always been its people--their readiness to fight; commitment to one another; and their dedication to the Army and the Nation in war and peace. Yet the living and working conditions of soldiers and family members are often inadequate. The FY 1984 budget request will correct many of the long-standing deficiencies; however, it will take a continuing commitment on the Army's part coupled with Congressional support to provide the living and working environment which soldiers and family members need and deserve.

VI. BUDGET EXECUTION

FY 1982 budget execution was characterized by financial turbulence for almost half the year. The Defense and Military Construction appropriations operated under continuing resolutions for nearly one-fourth of the fiscal year. The continuing resolution periods were highly disruptive to normal financial operations due to the number of periods and the late receipt of new OMB apportionment procedures. Thus the Army got off to a slow start in execution of its programs (only 21% obligated in the first quarter of FY 1982 as compared to 22% in FY81).

Operations during the last quarter of the fiscal year were also highly irregular. The FY 1982 supplemental was not passed until late August, the President vetoed it and Congress voted to override the veto in September. The military personnel appropriations were forced to withhold payments of taxes in order to meet the August payrolls. Permanent change of station moves and promotions were delayed during this period of uncertain fund availability. Additionally, the Army received very little of its program supplemental request. Late receipt of both the supplemental and reprograming approvals, compounded by delays in administrative processing of apportionment/reapportionment documents (1105's) and nonexpenditure transfer authorizations (1151's), created considerable funding turbulence through the last day of the fiscal year.

In spite of the turbulence and uncertainty surrounding FY 1982 execution, the Army was successful in obligating its planned program. In the military personnel appropriations, successes in recruiting and retention caused strengths to exceed programmed levels for most of the year. Higher quality accessions were achieved with a larger percentage of high school graduates and a lower percentage of mental category IV. It was only after hiring freezes were imposed that strength levels dropped below plan. The higher strength levels required reprograming actions to transfer funds to pay personnel. Nearly $100 million was transferred into the military personnel appropriations during FY 1982.

The operation and maintenance appropriations successfully executed their programs, lapsing only about $50 million or 0.3% of fund availability. For the first time in 10 years, the backlog of maintenance and repair was reduced. Normal operations were disrupted by the 3-month continuing resolution and the late supplemental appropriations, and difficulties were experienced in executing the force modernization program as appropriated by Congress. A net $179 million was transferred out of the Operation and Maintenance, Army appropriation during the year, primarily for foreign currency fluctuation, CHAMPUS and increased military strength. Almost 13% of the FY 1982 O&M appropriations were obligated in September.

The procurement and RDT&E appropriations exceeded their planned obligations for FY 1982. While behind the FY 1982 plan most of the year, the procurement appropriations improved execution performance by obligating more of their program earlier this year than last and, overall, had a smaller September surge in obligations (15% in FY 1982 compared to 21% in FY 1981). In the aggregate, reprograming transfers decreased four of the procurement appropriations, primarily to finance increased military strength and aircraft spares. The RDT&E appropriation lapsed only $1.4 million (.04%) of their $3,124 million FY 1981 program, while the procurement appropriations lapsed $102M (1.5%) of their $6,547 million FY 1980 programs ($71 million (1.1%) was lapsed for contingent liabilities).

The military construction appropriations executed their programs without serious problems and exceeded their annual plans by year-end. The Military Construction, Army appropriation reported a savings of $185 million due to low bids resulting from economic conditions; these savings will be used to fund FY 1983 unfunded projects. The revolving funds ended the year in a good cash position.

In conclusion, the Army's FY 1982 budget execution was good but can be improved. Actions are currently in progress to correct some of the factors contributing to program turbulence in FY 1982.

A new procedure to provide obligation authority to the field in the form of "targets" during a continuing resolution was instituted in FY 1983 and is operating well. MACOM's and field activities are not experience the uncertainties and funding disruptions of previous continuing resolution periods.

A study is under way to reevaluate the timing and necessity of reprograming actions and the House Appropriations Committee has proposed enactment of pay supplementals along with the appropriations act. Both of these actions would considerably reduce year-end funding turbulence.

More intensive management of force modernization programs has been instituted to insure that funding appropriated for force modernization is used for that purpose.

Various alternatives are being explored to improve outlay forecasting and get field activities more involved in the process. The current emphasis on outlays during the budget process and the possibility of outlay controls in the future makes it essential to understand, project and control oulays.

Guidance is being developed to stress improved obligation planning for all appropriations. The intent is to encourage obligation of programs earlier in the fiscal year and thereby reduce the magnitude of September obligations. Large September obligations are considered poor management, contributing to expedited and costly procurement practices, allegations of improper yearend spending and large deobligations in the next fiscal year.

VII. SUMMARY

In my professional view what we seek in this budget is rational; it has direction and it is well conceived. If funded with a degree of predictable constancy over the years ahead, the requested budget will serve the nation well in a time of serious challenges to the central interests of the United States.

TRIBUTES TO GENERAL MEYER

Senator **Stevens**. Thank you very much.

Senator Rudman, do you have an opening statement?

Senator **Rudman**. Only to say to General Meyer, and to join you, Mr. Chairman, and the Secretary, that I am familiar with General Meyer's record as Chief of Staff.

I am also very familiar with his record before that. He has served this Nation with great distinction, not only as Chief of Staff which we are all familiar with, but his record as a soldier, as a combat leader, has been exemplary.

I agree with you, Mr. Chairman, it is a shame that we lose so many people who in my view are at the peak of their effectiveness.

I also share General Meyer's comments that I think the Army is doing most of the things very well, a few not well, but that, of course, is true of most everything.

Senator **Stevens**. When did you come into the Army, General Meyer?

General **Meyer**. I was commissioned in 1951.

Senator **Stevens**. Is that 32 years ago now, General?

General **Meyer**. My wife says so.

Senator **Stevens**. We are delighted that you are here. All of us have a feeling that there ought to be some way to continue the services of the people who have the experience you have like we have from the district judges, after they have stepped down, they still serve when they want to serve. We have to explore that one of these days and see what we are going to do with those of you who have so much experience and knowledge.

Senator Proxmire, do you have an opening statement?

Senator **Proxmire**. My only comment is that I can't believe this young man, who is sitting here and is too young to be a General, is retiring because he has been in there so long. I can't believe that. Maybe you ought to run—no.

Senator **Rudman**. I think he is from Wisconsin actually.

Senator **Proxmire**.You are doing a great job.

ARMY SHARE OF THE DEFENSE BUDGET

Senator **Stevens**. We are a little concerned about the allocation of the dollars in this budget to the Army, Mr. Secretary.

How come the Army came out third again in the allocation of moneys under the total defense budget?

Secretary **Marsh**. Senator, as you noted, the Army's portion of this year's budget is 24 percent. That allocation, of course, is made at the Office of the Secretary of Defense—OSD. It is based on the national defense priorities as they are perceived.

We believe that the sums allocated for the Army are at the margin where we can perform the tasks that we have to perform. The encouraging part is that we will continue to build in the outyears ahead. It is very essential that we continue that building process and that we complete it if we are to meet our midterm objectives.

EMPHASIS ON MODERNIZATION

Senator **Stevens**. It appears we are putting heavy emphasis on modernization as opposed to readiness, Mr. Secretary. You, yourself, say this 780,000-man Army and 16 divisions is fairly adequate to meet our needs.

What do you think we ought to do in light of that statement?

We seem to be maintaining a trend of almost equivalency over these years since the initial buildup while the other services are pulling ahead quite rapidly.

Secretary **Marsh**. Senator, there has been significant growth in past years and there is significant growth in the Army budget this year. The numbers of forces and divisions that would be allocated to the Army, I believe, by the Joint Chiefs would be substantially greater than the current size of the U.S. Army.

In reference to the question of modernization and readiness we feel there is an interrelationship, a very definite one, between modernization and readiness. Bringing into the inventory new equipment such as armor, helicopters, and other weaponry, does make a quantum contribution to readiness as opposed to the current inventory.

Senator **Stevens**. General, our figures show that you have a 3.7-percent real growth overall whereas the Air Force and the Navy, 13-percent real growth. This is a period compared to the current fiscal year.

General **Meyer**. I believe that is a redirection of effort.

Senator **Stevens**. Pardon me, that is 1982 to 1983.

General **Meyer**. I understand. I believe that reflects a focus on some of the strategic programs which have been directed. I have said before that one of the most difficult things to explain within the halls of the Pentagon or anywhere is how critical trucks are, how critical are the very mundane things that it takes to run an Army.

That is why we have tried to be sure that in our program we are able to take care of the basic things as well as the more sophisticated items.

I share your concern. As I have said before, one of the great failures I have had is an inability to explain better the needs of the Army.

Senator **Stevens**. What happens to troops in Europe under this budget?

Secretary **Marsh**. The number stays the same, as I recall. We have about 217,000 in the European forces.

Senator **Stevens**. The end strength in European forces is fairly static, is that right?

Secretary **Marsh**. Yes, sir.

AIR DEFENSE

Senator **Stevens**. What is going to happen when you put in the Pershing II?

General **Meyer**. At the present time we will not take out other forces to offset that. We already have a Pershing I over there. The Pershing II is to replace the Pershing I and in fact does require a lesser number of personnel.

Senator **Stevens**. We are led to believe that the Air Force is going to take over its own air base defense in Europe.

Will that relieve some of your people?

General **Meyer**. The air base defense that the Air Force would take over would be point defense around selected air bases to augment our area coverage.

Our air defense over there is in a band across the front consisting of intergrated short- and long-range systems which are principally in support of the ground forces and priority assets throughout the theater, including many air bases.

If they didn't augment the air defense of selected air bases, we would have to request more force structure to do it. It is a task that needs to be performed.

PAY INCREASES

Senator **Stevens**. Last year, Mr. Secretary, you were asked to absorb 25 percent of the pay increase.

This year there is an indication that notwithstanding the President's request that there are people who are going to request that the military receive the 4-percent pay increase which we equate to about 6½-percent cost due to retirement and other costs.

Are you going to be able to absorb that, too, this year?

Secretary **Marsh**. Senator, that would have a very adverse impact on the budget as currently presented. I would hope that the President's proposal to freeze the pay for 1 year would be supported. I would also hope that an increase in pay in the ensuing year—as a catchup—would be supported.

Senator **Stevens**. Now your people have had a 30-percent pay increase in the last 3 fiscal years total. This year we have inflation down below 5 percent.

I do hope that we can support the President's position on not having a pay increase this year. It will make a considerable difference to the amount we will have to otherwise cut out of the whole force structure and modernization program.

I don't see them suggesting we are going to get any more money allocated by this subcommittee if that pay bill passes. I do think this is the time when we can afford to have an across-the-board concept as far as no pay increases for anybody.

Secretary **Marsh**. This is the point that I make. The decision by the administration for a pay freeze was made very reluctantly, particularly insofar as defense is concerned. But it is a decision that we think we certainly can support for 1 year and we would hope in the following year there would be a catchup bill that would take into account the fact that there has been a freeze this year.

We support the freeze for this year, sir.

Senator **Stevens**. As a matter of fact, I was told last night for the first 2 months when the figures come in we will have 1.725-percent inflation. If it is at that level for 1 year, the subsequent pay adjustment would be in the order of a real increase in pay as opposed to just a cost of living adjustment. I hope we can hold it this year.

Senator Rudman.

PROCUREMENT REDUCTIONS

Senator **Rudman**. Mr. Chairman, I have just a few questions. I pick up on what you have just said.

Yesterday in talking to General Vessey and the Secretary we discussed General Gabriels' comment which was shortly after the announcement of the freeze proposed by the President.

General Gabriel made the comment that he would, given his choice, prefer to have some reduction in some of his procurement rather than impinge on pay and benefits.

Listening to General Meyer's comments about people, which I share, I just wonder. I understand you support the President's position and that is what you should do, but that is not a policy of the Army, it is institutional policy.

General Meyer, from your own personal point of view, how much do you think this is going to impinge on the quality of your forces? Would you rather make some other adjustments, assuming that you could?

General **Meyer**. My answer is that I would prefer not to have had to take the pay freeze. I would prefer to take it out of something else and would be ready to do that. It was a conscious decision we were directed to abide by.

As to what impact it will have, I think the jury is still out on that. As the chairman indicated, if soldiers see it as something shared by everybody for 1 year, most of them will be willing to put up with it.

There will be some who will use that as a basis for getting out because they are not sure what will happen next year and the year after that, leading to a situation similar to that which existed before Congress finally took the step that put us in our current position; that is, paying soldiers on an equitable basis.

Senator **Rudman**. On the visits I have made, and I have made many the last 2 years to Army units and other units around, the message that comes through is that they have finally found that they are being recognized, particularly in the middle enlisted grades, E–4 to E–9. I just hope we don't give the wrong signal because we can buy all the fancy equipment we want, but it won't do us any good if we don't have the quality people running it.

We have a situation here where the procurement budget has a very substantial constituency here in Congress, a very substantial constituency in the Nation, but the soldier out there at Fort Lewis or the Second Division in Korea or the sailor on the *Nimitz* in the Mediterranean does not have much of a constituency.

I would rather see some shift in the procurement budget.

BRADLEY FIGHTING VEHICLE

General Meyer, I have two brief questions.

I have been at Benning and had a good demonstration of the Bradley. I have had a chance to drive it and talk to the people. It appears to be a good vehicle with most of the bugs worked out. There is a philosophical problem I want to ask you about this morning. That is this:

The experience in Israel, that the Israelis found, from the intelligence data I have that is not classified, indicates that with their various types of light antiarmor weapons they did quite a number on all the Soviet aluminum-hulled troop carriers that were in the forward edge of the battle area.

We are planning to buy 6,000 Bradleys and they are expensive. Is anyone in the Army starting to have second thoughts about whether or not this particular vehicle is going to be able to be used under the doctrine you propose in the forward edge of the battle area or whether or not the proliferation, and we know there is a heavy proliferation in the Soviet forces, of light antiarmor weapons on the forward edge of the battle area will make them vulnerable?

General **Meyer**. Based on the same unclassified results as the Israeli-Lebanon operation that you speak of, I think there are two preliminary conclusions. First, where the fighting vehicle is exposed, it is vulnerable to the missiles that exist today on the battlefield. A key factor in it is how fighting vehicles are used. If they are used like tanks they are going to be destroyed because they are not tanks. Even in the American Army, one of the most difficult training tasks we have is the proper use of fighting vehicles. That was true when I came into the Army when we had halftracks. I went to a mechanized outfit and had to learn from the first sergeant how it should be employed. So, one of the conclusions is that we must focus on how vehicles are employed.

Second, the Israelis have determined from their experiences that they have to give greater protection to their armored personnel carriers.

I believe that we need the infantry fighting vehicle, a tank, and some kind of attack helicopter to give us an enhanced offensive capability on the battlefield. Where Israelis had personnel carriers that were destroyed, the infantry should have been on the ground.

That is why the Secretary made the comment earlier that we are focusing more on the lighter end of the spectrum so that we have light infantry out to do those kinds of jobs. We ought not have our expensive equipment out doing the kinds of jobs that a light infantryman can do on the ground.

It is achieving the right mix that will give us the best opportunity to maximize the potential of those systems coming in.

Senator Rudman. The reason I ask the question is that when we look at the procurement budget, when you visualize the Bradley with its firing ports when it is within range of using firing ports, it is within range of a soldier with an RPG.

I have no suggestion whether or not we ought to think of less expensive vehicles, high-speed vehicles, to bring the infantry up to the area, not to think that it is a fighting vehicle. That is something that the Army really ought to look at because we are talking about an enormous amount of money over the years for the Bradley. It is a good vehicle. Maybe we need some of them. Maybe we need some others.

DIVISION AIR DEFENSE GUN (DIVAD)

On Divad we are faced with appropriating funds for its actual production. Without getting into a lot of details, I understand there are some questions still remaining about its effectiveness and whether or not it is working.

The DIVAD gun can defeat the threat against which it was designed.

General **Meyer**. The basic issue on the DIVAD has been affordability. That is the reason it is always flipping in and out every year as we go through the program. It is one of those effective systems that is in a questionable affordability status when we get down to a constrained number of dollars. We are constantly looking at it to see whether or not it is in fact affordable.

DIVAD is a system which was brought along in a compressed procurement cycle of 6 years, as we were directed by Congress. It has been done using off-the-shelf stuff rather than starting at square 1. Both of the companies that produced prototypes produce very fine systems. Now I think the basic point is that we are buying a lot of them. The issue of how many we are buying is the critical issue. It is one of those effective systems that has been right at margin of priorities on occasion.

Senator **Rudman**. You don't have any problems with the fact that there are some questions as to whether or not it is effective against high-speed aircraft?

General **Meyer**. I think that is an operational issue that we will be able to handle. The system, during testing, demonstrated its capability to defeat high-speed fixed wing aircraft.

Senator **Rudman**. Thank you very much.

Senator **Stevens**. Senator Proxmire.

MILITARY PAY

Senator **Proxmire**. Mr. Secretary, I sent out for the economic indicators, I don't have them with me, but it is my understanding that the pay increase for most people in our society is going to be substantial this year as it was last year. It will be 7 or 8 percent.

Furthermore, it is clear that if there was a 10-percent increase in each of the last couple years, that that is a very, very low base for people in the military compared to those in the civilian sector.

I feel very strongly that we can make economies in the military as we can everywhere. I seriously question whether we should make economies in personnel because I think that is absolutely the essence, the heart and soul of a strong military force.

It depends on the quality of the people. It depends on their training, whether they stick with it after they get the training. It depends on the leadership. It depends on their motivation. Of course, you can't buy it with money.

On the other hand, if you don't pay enough, you just don't get people who will make a career out of the military and stay with it.

I understand your position, but I hope you will be able to find a place in your budget somehow where you can work with the other services. I realize that will be a service wide action.

I realize also it is very difficult because, as Secretary Weinberger properly pointed out to us yesterday, the sacrifice is being asked of all Federal employees and if you exempt the military, then you have a big exemption. I do think the military has been underpaid for so long and their function is so vital to us.

Secretary **Marsh**. I concur. I also point out that a substantial contributor to the progress and gains we have made has been the assistance that we have received from the Congress during the last several years in that very area.

Senator **Stevens**. Mr. Secretary, I want to tell you I happen to be chairman of the Subcommittee on Civil Service. I know you have 400,000 civilians who in the last 4 years have had a 15-percent pay increase whereas your military people in the last 3 years have had a 30-percent pay increase.

Military people do not contribute to their own retirement. The civilians do. The civilians this year are going to be asked to contribute not only to their own retirement, but social security, too, and to Federal health benefit programs, and have medicare deductions this year.

I want to tell you I am not opposed to a pay increase for the military, I am all for it. If the military is going to get it this year, the civilians are going to get it, too.

It is not going to be one-sided again because it is already having an impact on the civilian structure of this Federal Government, the fact that we have in fact discriminated against them 3 years in a row in favor of the military.

Particularly with this new discrimination in terms of social security and the retirement plan, I think it would be unconscionable, in my opinion, to have a pay raise in the military and not have one for the civilians.

If we are going to have one, we will have one for everybody as far as I am concerned. That is the reason the President had to make the decision he made.

Secretary **Marsh**. That is right and that is why it is governmentwide. As I said, we certainly support that decision of the President.

Senator **Proxmire**. Mr. Chairman, I feel very uneasy in any argument with you. You have been an expert in this area. You have been a real champion of adequate compensation for people in the military as well as those in civilian work. I certainly have not been. In fact, I have been a critic, more of a critic than a supporter.

I think under these circumstances we do disagree, but I disagree with the greatest respect to the chairman.

Senator **Stevens**. Thank you, Senator.

REDUCTION IN THE DEFENSE BUDGET

Senator **Proxmire**. Mr. Secretary, yesterday the Secretary of Defense had a chart which said that the reductions have not been confined entirely to the private sector. He made quite a bit of that. He made the point that the Defense Department reduced programs under the March 1981 budget that President Reagan wanted to have by some $60 billion, half of which was adjusting inflation estimates.

Specifically what programs has the Army curtailed or eliminated as part of the so-called savings program?

Secretary **Marsh**. Senator, I would like to amplify that for the record because there are a number of programs that we have dropped.

We dropped the Roland, which is a very significant air defense system. We dropped Rattler. We also dropped the SOTAS.

Senator **Proxmire**. When you say significant, will you give me some indication of the dollars involved?

Secretary **Marsh**. Can you do that, General Davis?

General **Davis**. Senator, on the two programs that were canceled by the Army in the fiscal year 1984 budget, Rattler and the TOW-II on the Bradley, it was $96.8 million combined for those two programs just in 1984.

I would like to provide the others for the record.

Senator **Proxmire**. We are talking about a multibillion dollar procurement budget. I realize that there are some changes you make in judgments that may cost several hundred million dollars. I am talking about billions here. That was the only way you could get a $60 billion savings.

I have the feeling that part of that was the fact that you are forgoing a pay increase and we have already discussed that element. Part of it is inflation. Much of it may be readiness.

I am wondering, of the billions and billions of dollars, how much is any kind of sacrifice in programs or procurement?

PROCUREMENT/R&D PROGRAMS

Secretary **Marsh**. Senator some have been dropped. Additional programs are currently being reviewed. The SOTAS and Roland programs contained very substantial sums of money.

I can expand that for you, sir, with a listing of those systems and indicate what was saved by their being dropped or canceled.

Senator **Proxmire**. If you can give that to us for the record, I would very much appreciate it.

[The information follows:]

PROCUREMENT/RESEARCH AND DEVELOPMENT PROGRAMS

Secretary **Marsh**. Army continually evaluates existing and planned procurement and research and development programs to validate their continued need and the priority of that requirement relative to all other candidates for resources. The greatest emphasis in this evaluation process occurs as final decisions are made on the President's Budget submission. Savings resulting from decisions to curtail or cancel programs are captured under the Economies, Efficiencies, and Management Improvement Program; data from that program are available for such decisions made during the fiscal year 1983 and fiscal year 1984 Budget process.

The systems listed below are those for which savings are reflected under the Army's Economies, Efficiencies, and Management Improvement program as the result of decisions to curtail or cancel these programs.

A. Fiscal year 1983 Cancellation Initiatives:

[In millions of dollars]

System	Appropriation	Fiscal year 1982–fiscal year 1988
Terminal guidance system	RDTE	115.4
Smart munitions	RDTE	14.9
Field Army survey	RDTE	2.7
Fire and forget Hellfire	RDTE	258.4
Explosive demolitions	RDTE	8.5
Roland	RDTE	22.5
	MSLS	3.7
SOTAS	RDTE	−13.5
	ACFT	495.4

B. Fiscal year 1984 Cancellation Initiatives:

2.75" Rockets	PAA	180.8
ADM fire control	RDTE	40.0
Tactical Earth penetrator	RDTE	43.8
Command control systems	RDTE	16.2
Armored forward area rearm vehicle	RDTE	8.7
AN/TVS-5 night sight	OPA	20.6
Electronic display system	OPA	45.6
TRI-TAC mobile subscriber equipment	RDTE	43.7
TRI-TAC mobile radio teletype	RDTE	102.7
Terminal guided projectile, lethal emitter attack	RDTE	86.9
Indirect fire training munition	RDTE	2.3
25mm ammo PIPS	RDTE	2.8

C. Additionally, in completing the fiscal year 1984 President's Budget, the following Army programs were curtailed or reduced with savings as indicated:

[In millions of dollars]

System	Appropriation	
Improved message facility	OPA	8.7
Reduction of winch vehicle Rqmts	OPA	117.3

STRATEGIC MOBILITY

Senator PROXMIRE. Now, Mr. Secretary, I notice in your statement for the record that you discuss the Army's strategic mobility requirement.

Secretary MARSH. Yes, sir.

Senator PROXMIRE. This includes airlift and sealift as well as the need for additional prepositioned equipment in Europe.

Would you comment on the adequacy of the current budget in fulfilling these requirements or any other problem we have on these issues?

Secretary MARSH. Seantor, as you indicated, there are two principal areas of concern that we have.

One is on the fast sealift to be provided by the Navy. I think there is a greater awareness in the Navy of this need.

Currently the Navy has eight SL-7's to be converted to roll-on/roll-off configurations. Three of them will be completed by June 1984 and another by October 1984. Funds for conversion of the remaining four ships are included in the fiscal year 1984 Navy Budget.

That number of ships will not be enough, though, to meet the basic criteria, which is, to deploy overseas two divisions and all of their equipment within a specified time.

Second, with regard to airlift we seem to focus on intertheater, that is, being able to move from the United States to some other continent or to another theater. A major problem that we have in airlift from an Army point of view is intratheater lift. That is now being performed by the C-130 aircraft in the Air Force.

It is an outstanding aircraft, but it is aging. It also is limited in what it can carry from the standpoint of what we would refer to as outsize equipment. We need intratheater lift.

Senator **PROXMIRE**. You need what?

Secretary **MARSH**. Intratheater lift, the ability to move inside the theater.

General **MEYER**. On the sealift side of it, first of all, we will have four SL–7's being completed in 1984, and four in 1986. That will give us about half the fast sealift the JCS believe is needed to get us where we need to go in the required time.

Senator **PROXMIRE**. What does that mean?

General **MEYER**. That means instead of the eight SL–7's we will have, you need somewhere between 16 and 18 of those same kind of roll-on/roll-off type ships

Senator **PROXMIRE**. If you had adequate budget, you would have twice as many?

General **MEYER**. Yes. That means you would have greater flexibility and more independence of overseas bases. If you don't have enough forces to go around, you need flexibility—in command and control, and strategic mobility. Strategic mobility is critical. That is why the Army has been strong proponents.

The JCS indicated in the congressionally mandated mobility study provided to you that there is a 100,000 short-tons shortfall beyond what is currently planned to do what we believe is necessary.

I would reiterate what Secretary Marsh said about the need for a followon to the C–130 and C–141. There is nothing on line to do that. They are old birds and that means they can't get into austere landing fields.

Senator **PROXMIRE**. How much more would you need to do this all the way?

SPECIFICS ON REQUIRED STRATEGIC MOBILITY

General **MEYER**. To have the required strategic mobility? I would have to provide the specifics for the record. I will do that, sir.

[The information follows:]

SPECIFICS OF STRATEGIC MOBILITY

In response, both inter-theater (strategic) and intra-theater (tactical) mobility are addressed from an Army perspective rather than a multiple service viewpoint. Army forces rarely deploy separately, but rather as part of a joint Service force in response to various contingencies. DOD has created a vigorous program which is leading to solutions that will resolve many of our shortfalls that result from the requirement to deploy a joint force.

Progress is being made as evidenced by the funding of strategic air and sealift programs, aerial refueling, as well as cargo off-load systems. A notable initiative is the funding of C-17 RDT&E which represents a major step toward enhancing both inter and intratheater airlift. Of critical importance to the Army is that sufficient funding is provided from FY 83 to FY 85 to insure that an FY 1991 Initial Operational Capability is achievable for C-17.

There continues to exist a need for intertheater air and sealift above that which is currently programmed. The current airlift program for the KC-10, C-5B, and Civil Reserve Air Fleet is moving in the right direction to meet the Army mid-term objective. However, it must continue beyond the current program to achieve the 66 million ton-miles per day capability recommended by the Congressionally Mandated Mobility Study (CMMS).

The Army also requires Congressional support for its efforts to complete the Prepositioning of Materiel Configured to Unit Sets (POMCUS) program. The Army just cannot afford the amount of airlift required to move Division Sets (DS) 5 and 6 to meet its rapid reinforcement objective of ten divisions in ten days to NATO.

Also essential is support for Host Nation Support agreements which represent a viable alternative to active and reserve component support units that would have to be airlifted to satisfy early combat service support requirements.

A mobility initiative that will add significant capability to meet Army fast sealift needs is the SL-7 acquisition and conversion program. Another area in which the Army needs continued Congressional support is FY 84 funding for the conversion of the remaining four ships. An additional 100,000 tons of fast sealift is also needed by the Army to provide the flexibility and capability to rapidly project forces. This amount of sealift was recommended in CMMS and is now undergoing a thorough analysis during a DOD Sealift Study. This 100,000 tons of sealift must be rapidly loadable and unloadable, e.g., Roll-on/Roll-off (RORO) sealift, and capable of meeting our deployment requirements to SWA.

The final results, which we expect in May 1983, will be the basis for future DOD programming actions. The requisite costs associated with those programs will then be available for review.

The Navy is already investigating alternatives to increase early available strategic sealift to offset this shortfall.

Substantial activity has also taken place with respect to cargo offload and discharge systems. An example is the Navy Auxiliary Crane Ship (TACS) program to meet the off-load requirement for containers and heavy unit equipment in theaters which lack developed port facilities. However, the six TACS, funded in the Navy program to discharge U.S. Marine Corps units, appear to be inadequate to meet the Army's reception and discharge requirements.

The military utility of the U.S. Merchant fleet is seriously affected by the trend toward larger non-selfsustaining containerships. The container fleet is quickly dominating the U.S. Flag fleet, but possesses very limited capability to provide the sealift required to project forces quickly. The Navy is developing programs to harness some of this capability through the development and acquisition of flatracks and seasheds. These are essentially inserts which can be installed in container cells of a containership, converting it to breakbulk ship configuration. However, the overwhelming preponderance of these vessels are unlike traditional breakbulk ships which possess the capability to discharge themselves. To discharge non-selfsustaining containerships outfitted with flatracks and seasheds requires the funding and acquisition of additional TACS by the Navy. The Army has stated that to meet its SWA discharge objectives, five such vessels would be necessary. The approximate cost of these vessels is $125 million above those currently funded in the Navy program. The DOD Sealift Study is analyzing the Joint Service TACS requirement and will adjust this quantity based on the Navy flatrack and seashed programs. These are complementary programs requiring your support if the Army is to be capable of quickly projecting its forces into a theater as well as through the port or over the shore.

As stated in the initial comments, the Army, in conjunction with the Air Force and Navy, is working together in seeking specific near term procurement programs to deploy and sustain Army forces. Additionally, the Army is working closely with the Air Force to develop a long term airlift acquisition and modernization plan that looks at the Army's airlift requirements for the mid and long-term. This plan, with OJCS and OSD support, will be helpful in determining the priorities for funding in the years ahead. Congressional support must be continued to maintain the momentum beginning to be generated. Unless current efforts are continued, the ability to rapidly deploy Army forces will be jeopardized.

PREPOSITIONING

General **Meyer**. There are two other areas that impact on strategic mobility.

One is prepositioning. You don't have to have as much lift capability if you preposition. Because we are short of strategic mobility, we are prepositioning. If we had more strategic mobility, you would not have to do quite as much prepositioning. So, if you don't have sufficient lift capability, you have to cut down how long it takes to respond to crises by putting equipment on ships at Diego Garcia or depots in Europe.

The other is our effort to make our forces lighter without reducing their competence. This can reduce the strategic mobility requirements. You have to work the challenge from all those angles. That is what we are trying to do, but there is still a major shortfall.

FISCAL YEAR 1982 REPROGRAMING REQUEST

Senator **Proxmire**. I understand the committee has under consideration a fiscal year 1982 programing action on fast production. This would make available funds for procurement of M1 tanks to replace sales to foreign governments of the older model M60.

So you still support that reprograming? I understand that three relevant committees have approved the reprograming.

Senator **Marsh**. Yes, sir, we support it. I think it would be very helpful because it would enable us to acquire about 35 more M1's.

FORT M'COY, WIS.

Senator **Proxmire**. General, during 1981 I had an exchange with you by letter dealing with the utilization of Fort McCoy.

Senator **Stevens**. Will the Senator yield on that last question?

Senator **Proxmire**. By all means.

Senator **Stevens**. This subcommittee has not approved that reprograming as of yet.

Senator **Proxmire**. I said the other three relevant committees approved. I meant to say that. Perhaps I misspoke.

During 1981, I had an exchange with you by letter dealing with utilization of Fort McCoy. You said it was your intention to double the use of Fort McCoy for winter training by bringing two brigades there. You also indicated certain military construction activities would take place.

Given the importance of winter training, can you tell me why these plans were not carried out, that is, why the double rotation plan was canceled, and can you tell me what the plans are for the fiscal year 1984 budget for McCoy?

General **Meyer**. I will have to get the Forces Command Commander to review that with me on exactly what is scheduled. We do have a brigade there now. I have talked to soldiers getting ready to go there from Fort Ord. There are also some going up from Fort Carson.

Such operations provide a superb opportunity for our soldiers to get winter training. We had units in Alaska on Brim Frost this past fall. The whole issue is dollars, just the flat issue of dollars.

Senator **Proxmire**. That is not a very big expense.

General **Meyer**. It is not. I will have to go back and review it.

Senator **Proxmire**. Give us what you can.

General **Meyer**. I will, sir.

WOMEN IN THE ARMY

Senator **Proxmire**. Mr. Secretary, how many women are now in the Army and what are your plans for increasing the percentage in the coming year?

Secretary **Marsh**. Let me be precise on the figures for the record. We have about 65,000 enlisted women at this time with roughly 9,000 officers that you could add to that.

The Secretary of Defense has indicated that our enlisted women strength should be allowed to increase to 70,000, but that was not to be considered as either a cap or a ceiling on the enlisted strength.

Senator **Proxmire**. What percentage does that constitute of your enlisted personnel?

Secretary **Marsh**. About 10 percent.

Senator **Proxmire**. Ten percent?

Secretary **Marsh**. Roughly 10 percent.

Senator **Proxmire**. Just in sheer numbers, that is encouraging. Is there any other Army in the world that has that high a percentage of women?

Secretary **Marsh**. I don't think so.

Senator **Proxmire**. I commend you on that. I think that is a great improvement for many reasons.

Press accounts give the impression that the Army reduced its goal for women in uniform and it has excluded them from more occupational specialities, MOS's.

What restrictions have you imposed on women in uniform?

Secretary **Marsh**. I think we have sought to actually maximize opportunities for women in the Army.

General Meyer might want to amplify.

General **Meyer**. Previously, the Army had a personnel system which virtually insured women soldiers would fail. We were ordered to take in a whole bunch of women, and we put them in jobs where they really had no opportunity to succeed.

There was never a platoon of women in basic training that won best platoon. So they felt ill of themselves. The males felt they were not pulling their fair share of the load when we put them all together. From a physical point of view, we put women into jobs which they weren't able to carry out. The men thought the women were not doing their job, so we had harassment occurring.

We looked at the system and said all right, if we are going to have women in the Army, how can we give them an opportunity to be successful? We looked at it two ways.

One was physical and we did it gender free. It was the first time in history any Army has looked at every job to see what the physical requirements were. We identified those jobs and the physical capabilities needed by people to handle them.

Senator **Proxmire**. Can you give us a list of the jobs?

[The information follows:]

WOMEN IN THE ARMY

Yes, the following is a listing of Enlisted Military Occupational Specialties arranged by physical demand categories.

LIGHT WORK DEMANDS

005	Recruiter
01H	Biological Sciences Assistant
16H	Air Defense Artillery Operations Intelligence Assistant
16Z	Air Defense Artillery Senior Sergeant
51T	Technical Engineering Supervisor
51Z	General Engineering Supervisor
54Z	Chemical Senior Sergeant
64Z	Transportation Senior Sergeant
71C	Secretary
71D	Legal Clerk
71E	Court Reporter
71N	Traffic Management Coordinator
71Q	Journalist
71R	Broadcast Journalist
74B	Computer Card and Tape Writer
74F	Programmer and Analyst
74Z	Data Processing NCO
79D	Reenlistment NCO
81B	Technical Drafting Specialist
91U	Medical ENT Specialist
00J	Club Manager
00U	Equal Opportunity NCO
31Z	Communications and Electronics Operations Chief
51G	Materials Quality Specialist
65K	Railway Movement Coordinator
65Z	Railway Senior Sergeant
72G	Automatic Data Telcom Center Operator
73C	Finance Specialist
73D	Accounting Specialist
73Z	Finance Senior Sergeant
75B	Personnel Admin Specialist
75C	Personnel Management Specialist
75D	Personnel Records Specialist
75E	Personnel Actions Specialist
75Z	Personnel Sergeant
81C	Cartographer
81Z	Topographic Engineering Supervisor
91Y	Medical Eye Specialist
96C	Intelligence Interrogator
96Z	Intelligence Senior Sergeant

MEDIUM WORK DEMANDS

00D	Special Duty Assignment
00Z	Command Sergeant Major
02B	Cornet Trumpet Player
02C	Euphonium Player
02D	French Horn Player
02E	Trombone Player
02F	Tuba Player
02G	Flute Player
02H	Oboe Player
02J	Clarinet Player
02K	Basoon Player
02L	Saxophone Player
02M	Percussion Player
02N	Piano Player
02P	Brass Group Leader

02Q	Woodwind Group Leader
02R	Percussion Group Leader
02S	Special Bandperson
02T	Guitar Player
02Z	Enlisted Bandleader
05K	Electronic Warfare, Signal Intelligence N-M Interp
13Y	Cannon Missile Senior Sergeant
13Z	Field Artillery Senior Sergeant
15J	Multiple Launch Rocket System/LANCE/Fire Direction Sp
16F	Light Air Defense Artillery Crewmember
17L	Aerial Sensor Specialist
26R	Strategic Microwave Systems Operator
26T	Radio/TV Systems Specialist
25V	Strategic Microwave Systems Repairer
31N	Tactical Communications Systems Control Specialist
32D	Strategic Technical Controller
32Z	Communications Electronics Maintenance Chief
34E	NCR 500 Computer Repair Person
34F	DSTE Computer Repair Person
34H	ADMSE Computer Repair Person
34Z	Auto Data Processing Systems Maintenance Supervisor
35C	ATE Repair Person
35M	Avionic Navigation Flight Control Equipment Repairer
35P	Avionic Equipment Maintenance Supervisor
41B	Topographic Instrument Repair Specialist
42E	Optical Lab Specialist
51P	Utility Engineering Supervisor
65F	Locomotive Electrician
65H	Locomotive Operator
71G	Patient Administration Specialist
71L	Administrative Specialist
71M	Chapel Activities Specialist
71P	Flight Operations Coordinator
81E	Illustrator
82D	Topographic Surveyor
84F	Audio/TV Specialist
84T	TV/Radio Broadcast Operations Chief
84Z	Public Affairs/Audio Visual Chief
91D	Operating Room Specialist
91S	Environmental Health Specialist
91T	Animal Care Specialist
92E	Cytology Specialist
93E	Meteorological Observer
95C	Correctional Specialist
96B	Intelligence Analyst
96D	Image Interpreter
96H	Sensor Specialist OV-ID
97B	Counter Intelligence Agent
97C	Area Intelligence Specialist
98Z	Electronic Warfare Signal Intelligence Chief
92D	Chemical Lab Specialist

MODERATELY HEAVY WORK DEMANDS

03C	Physical Activities Specialist
05D	Electronic Warfare Signal Intelligence Ident/Loc
05G	Signal Security Specialist
05H	Electronic Warfare Signal Intelligence Interpretor
13C	TACFIRE Operations Specialist
13F	Cannon Fire Direction Specialist
13M	Multiple Launch Rocket System Crewmember
13W	Field Artillery Target Acquisition Senior Sergeant
15E	PERSHING Missile Crewmember

16C	HERCULES Fire Control Crewmember
17K	Ground Surveillance Radar Crewmember
23W	NIKE Maintenance Chief
24J	IH Pulse Radar Repair Person
24L	IH Laucnh Mechanical Systems Repair
24Q	NIKE/HERC Fire Control Mechanic
24V	IH Maintenance Chief
25L	AN/TSQ-73 Operator/Repairer
26C	Combat Area Surveillance Radar Repairer
26Y	Satellite Communications Equipment Repairer
31E	Field Radio Repairer
31S	Field Generator COMSEC Repair Person
32F	Fixed Ciphony Repair Person
32G	Fixed Crypto Equipment Repair Person
34B	PCM Repair Person
34C	DAS3 Computer Repair Person
34J	UNIVAC Systems Repair Person
34K	IBM 360 Repair Person
35E	Special Electronic Devices Repair Person
35H	Calibration Specialist
35R	Avionic Special Equipment Repair Person
36E	Cable Splicer
36L	Electrical Switching Systems Repair Person
41E	Audio Visual Equipment Repair Person
41J	Office Machine Repair Person
42C	Dental Orthotic Specialist
41D	Dental Lab Specialist
52C	Utilities Equipment Repair Person
63Z	Mechanical Maintenance Supervisor
68B	Aircraft Power Plant Repair Person
68K	Aircraft Computer Repair Supervisor
72H	Central Telecommunications Office Operations Operator
74D	Computer/Machine Operator
76Z	Senior Supply Sergeant
82B	Construction Surveyor
83E	Photo and Layout Specialist
84C	Motion Picture Specialist
91C	Practical Nurse
91E	Dental Specialist
91F	Psychiatric Specialist
91G	Behavioral Science Specialist
91H	Orthopedic Specialist
91J	Physical Therapy Specialist
91L	Occupational Therapy Specialist
91N	Cardiac Specialist
91P	Xray Specialist
91Q	Pharmacy Specialist
91W	Nuclear Medicine Specialist
92B	Medical Lab Specialist
93F	Field Artillery Meteorological Crewmember
94F	Hospital Food Service Specialist
95D	Special Agent (Military Police)
98C	Electronic Warfare Signal Intelligence Analyst
98G	Electronics Warfare Signal Intelligence Voice Intercept
98J	Electronics Warfare Signal Intelligence NC Intercept

HEAVY WORK DEMANDS

05B	Radio Operator
16J	Defense Acquisition Radar Operator
17C	Field Artillery Target Acquisition Specialist
17M	Remote Sensor Specialist
21L	PERSHING Electronics Repair Person

24C	IH Firing Section Mechanic
24N	VULCAN Systems Mechanic
24R	IH Master Mechanic
26D	GCA Radar Repair Person
27B	LCSS Test Specialist/LANCE Repair Person
27Z	BAL/LC/LAD Systems Maintenance Chief
31J	Teletypewriter Repair Person
31T	Field Systems Communications Security Repairer
32H	Fixed Station Radio Repairer
33S	Electronic Warfare Intercept Systems Repairer
35B	Electrical Installation Repairer
35G	Biomedical Equipment Specialist Basic
35K	Avionic Mechanic
35L	Avionic Communication Equipment Repair
35U	Biomedical Equipment Specialist Advanced
36C	Wire Systems Installer/Operator
36K	Tactical Wire Operations Specialist
44B	Metal Worker
44E	Machinist
45G	Fire Control Systems Repair Person
51H	Construction Engineering Supervisor
55X	Ammunition Inspector
55Z	Ammunition Supervisor
57E	Laundry and Bath Specialist
61C	Watercraft Engineer
61Z	Marine Senior Sergeant
63G	Fuel and Electrical Systems Repair Person
64C	Motor Transport Operator
65B	Locomotive Repair Person
65D	Railway Car Repair Person
65E	Airbrake Repair Person
67G	Airplane Repair Person
67H	Observation Aircraft Repair Person
67N	Aircraft Quality Control Supervisor
67Z	Aircraft Maintenance Senior Sergeant
68G	Aircraft Structural Repair Person
68H	Aircraft Pneudraulics Repair Person
72E	Combat Telecommunications Center Operator
76C	Equipment Requisition and Parts Specialist
83F	Pholithographer
84B	Still Photo Specialist
91R	Veterinary Specialist
93H	Aircraft Tower Control Operator
93J	Aircraft Tower Control Radar Controller
75P	Material Accounting Specialist
76Z	Senior Supply Sergeant

VERY HEAVY WORK DEMANDS

00B	Diver
05C	Radio TT Operator
11B	Infantryman
11C	Indirect Fire Infantryman
11H	Heavy AntiArmor Infantryman
11M	Fighting Vehicle Infantryman
12B	Combat Engineer
12C	Bridge Crewman
12E	Atomic Demolitions Specialist
12F	Engineer Traversing Vehicle Crewman
12Z	Combat Engineer Senior Sergeant
13B	Cannon Crewman
13E	Cannon Fire Direction Specialist
13R	Firefinder Radar Operator

15D	LANCE Crewmember/MLRS Sergeant
16B	HERCULES Missile Crewmember
16D	HAWK Missile Crewmember
16E	HAWK Fire Control Crewmember
16P	Air Defense Artillery Short Range Missile Crewmember
16R	Air Defense Artillery Short Range Gunnery Crewmember
16S	Man Portable Air Defense Systems Crewman
17B	Field Artillery Radar Crewmember
19D	Cavalry Scout
19E	M48-M60 Armor Crewman
19K	M1 Abrams Armor Crewman
19Z	Armor Senior Sergeant
21G	PERSHING Electronics Maintenance Specialist
22L	NIKE Test Equipment Repair Person
22M	NIKE/HERC Missile Launcher Repair Person
23N	NIKE Track Radar Repair Person
23W	NIKE Maintenance Chief
24E	IH Fire Control Mechanic
24G	IH Coordination Center Mechanic
24H	IH Fire Control Repair Person
24K	IH CW Radar Repair Person
24M	VULCAN Systems Mechanic
24P	Defense Acquisition Radar Mechanic
24U	HERCULES Electronics Mechanic
26B	Weapons Support Radar Repair Person
26E	Aerial Surveillance Sensor Repair Person
26F	Aerial Photographic Sensor Repair Person
26H	Air Defense Radar Repair Person
26K	Electronic Warning Defense Equipment Repairer
26L	Tactical Microwave Systems Repair Person
26M	Aerial Surveillance Radar Repair Person
26N	Aerial Surveillance Infrared Repair Person
26Q	Tactical Microwave Satellite Systems Operator
27E	TOW/DRAGON Repair Person
27F	VULCAN Repair Person
27G	CHAPARRAL/REDEYE Repair Person
27H	SHILLELAGH Repair Person
27M	Multiple Launch Rocket Systems Repairer
27N	Forward Area Alert Radar Repair Specialist
31M	Mechanical Communications Equipment Operator
31V	Tactical Communications Systems Mechanic
34Y	Field Artillery Computer Repair Person
35F	Nuclear Weapons Electronics Specialist
36D	Antenna Installer Specialist
36H	Dial Manual Central Office R29 Operator
41C	Fire Control Instrument Repair Person
41G	Surveillance Photography Equipment Repair Person
43E	Parachute Rigger
43M	Fabric Repair Person
45B	Small Arms Repair Person
45D	Self Propelled Field Artillery Turret Mechanic
45G	Tank Fire Control System Repair Person
45K	Tank Turret Repair Person
45L	Artillery Repair Person
45N	M60A1/A3 Turret Mechanic
45T	Infantry/Cavalry Vehicle Turret Mechanic
45Z	Armament Fire Control Maintenance Supervisor
46N	PERSHING Electronic and Mechanical Repairer
51B	Carpentry and Masonry Specialist
51C	Structures Specialist
51H	Construction Engineer Specialist

51K	Plumber
51M	Firefighter
51R	Interior Electrician
52D	Power Generator Equipment Repair Person
52E	Prime Power Production Specialist
52G	Transportation and Distribution Specialist
54C	Smoke Operations Specialist
54E	Nuclear Biological Chemical Warfare Specialist
55B	Ammunition Specialist
55D	Explosive Ordnance Disposal Specialist
55G	Nuclear Weapons Maintenance Specialist
57F	Graves Registration Specialist
57H	Cargo Specialist
61B	Watercraft Operator
61F	Marine Hull Repairer
62B	Construction Equipment Repairer
62E	Heavy Construction Equipment Operator
62F	Lifting/Loading Equipment Operator
62G	Quarrying Specialist
62H	Construction and Asphalt Equipment Operator
62J	General Construction Equipment Operator
62N	Construction Equipment Supervisor
63B	Light Weight Vehicle and Power Generator Mechanic
63D	Self Propelled Field Artillery Systems Mechanic
63E	M1 ABRAMS Tank System Mechanic
63H	Track Vehicle Repair Person
63J	Quartermaster and Chemical Equipment Repairer
63N	M60A1/A3 Tank Systems Mechanic
63S	Heavy Wheeled Vehicle Mechanic
63T	Infantry/Cavalry Fighting Vehicle Systems Mechanic
63W	Wheeled Vehicle Repairer
63Y	Track Vehicle Mechanic
65G	Railway Section Repairer
65J	Train Crewmember
67N	Utility Helicopter Repairer
67T	Tactical Transportation Helicopter Repairer
67U	Medium Helicopter Repairer
67V	Observation/Scout Helicopter Repairer
67X	Heavy Lift Helicopter Repairer
67Y	Attack Helicopter Repairer
68D	Aircraft Powertrain Repairer
68F	Aircraft Electrician
68J	Aircraft Fire Control Repairer
68M	Aircraft Weapons Systems Repairer
76J	Medical Supply Specialist
76V	Material Storage and Handling Specialist
76W	Petroleum Supply Specialist
76X	Subsistence Supply Specialist
76Y	Unit Supply Specialist
82C	Cartographer
91B	Medical Specialist
91V	Respiratory Specialist
92C	Petroleum Lab Specialist
94B	Food Service Specialist
95B	Military Police Person

WOMEN IN TOO-FAR-FORWARD STATUS IN COMBAT

General **Meyer**. Sure. It turned out we had many woman in very heavy-duty-type jobs. Consequently, women in those jobs were leaving the Army before their first term ended, at the rate of 55 to 60 percent, compared to a rate of 25 percent for the average person who was physically able to carry out their duties.

There were clear indications we placed women in the wrong jobs. What we did was look at jobs where women could succeed and give them that opportunity.

We also had concerns about women being in positions too far forward in combat. Initially, we had not identified where we wanted them. Later we did that. When we went through that whole system we concluded——

Senator **Proxmire**. What do you mean too far forward in combat?

General **Meyer**. They were farther forward than infantrymen in some cases.

Senator **Proxmire**. Why was that?

General **Meyer**. Because they had been put in signal units and signal relay units which had to be well forward.

Senator **Proxmire**. So what? The fact that their life is more at risk?

General **Meyer**. Yes. There are two aspects to it. One aspect of it is the ability to be able to carry out the job under the rigors of combat from a physiological point of view.

The other was a judgment factor as to how far forward we would have women in combat.

Senator **Proxmire**. I don't understand that.

General **Meyer**. In the battle area, on a permanent basis.

Senator **Proxmire**. For example, let me take one area. Supposing women were operating a helicopter.

General **Meyer**. They would be allowed to fly because they wouldn't stay there on a permanent basis.

Senator **Proxmire**. Why not?

General **Meyer**. I said they would be allowed to operate a helicopter.

Senator **Proxmire**. Why would they not be allowed to stay on a permanent basis?

General **Meyer**. We have made a decision as to how far forward we wanted women to serve in combat.

Senator **Proxmire**. Because they are women?

General **Meyer**. Yes.

Senator **Proxmire**. They may be more skilled.

General **Meyer**. And we are putting them in those jobs where they are skilled, but not as a rifleman. We were very careful to exclude them from the combat arms: the rifleman, tanker, artilleryman—those skills that have traditionally been male. You know, it is an issue—

Senator **Proxmire**. Of changing attitude, especially attitude that is as deeply ingrained as gender attitude.

It would seem to me that you can greatly benefit from overcoming these prejudices because I would think that in view of the fact that some of the jobs in the military are noncombat, so many of the jobs that are combat don't require any upper body strength which is about the only difference you can really establish between men and women, I just can't understand why risking your life in a dangerous forward position would make any difference whether you are a man or woman.

General **Meyer**. First, as far as the jobs are concerned, 83 percent are open to women across the board. The issue is whether or not you should risk women—these are congressional words—as far as combat is concerned. They say they will not be in combat. Congress tells us that. That is coming from Congress. That direction says women will not be in combat. Therefore, we had to define combat areas. We defined it as leniently as we could so that we could take maximum advantage of their skills.

The Israelis send their women back when the war starts. They are not in tanks. That is a conscious decision.

Senator **Proxmire**. No question about it, you can't do much about what Congress does and you are undoubtedly right about that, it is a congressional decision.

On the other hand, it seems to me that you folks have the greatest experience with combat and the record that the women have made in the military has been a very good one.

General **Meyer**. It has been superb in many areas where they had the opportunity to succeed.

ABSENTEE RATE

Senator **Proxmire**. What is the absentee rate for males compared to females?

General **Meyer**. If you ignore pregnancy, it is just about exactly the same.

Senator **Proxmire**. The same?

General **Meyer**. Slightly higher for males for other reasons.

Senator **Proxmire**. That is interesting. I hope you will document that. It is my understanding, even including pregnancy, that the absentee rate for males is worse.

General **Meyer**. I said it is slightly higher for males when you include pregnancy.

Senator **Proxmire**. Then you are barring women from certain jobs as a result of inherent lack of upper body strength.

Do you also test men for upper body strength?

General **Meyer**. We are planning on doing that as soon as we finish our analysis of which instruments can be used to best measure strength and stamina.

Senator **Proxmire**. In combat, isn't the issue who gets the job done best, not gender, color, age or religion?

General **Meyer**. Military effectiveness is the best test. All I can say is the Army is traditional. I will say we have never had a squad of women in combat.

I am not sure that the American Army that goes off to war ought to be the first one that has a squad of women as infantrymen fighting. I am not sure how that would work from a social point of view. I would not recommend that to Congress.

Senator **Proxmire**. Do you think women should be barred from risky jobs?

General **Meyer**. No. I have always said women will have risky jobs in the Army in the future because the war is not going to be limited just to the forward area. Women in the rear will be subject to threats and dangers as well.

Senator **Proxmire**. Why would you discriminate?

General **Meyer**. For the reasons pointed out. A woman in a squad or in a tank is not a good idea. My personal view is that we ought not to design our Army based on something that we don't know enough about—how it would turn out in combat. I'm not saying that over time it can't occur, but I would not recommend it to you now.

EFFECT OF THE PAY FREEZE

Senator **Proxmire**. Let me ask just one more question. I apologize for taking as much time as I have.

How much is the pay freeze going to hurt your retention effort, Mr. Secretary? Have you projected how many people you will lose as a result of the pay freeze?

Secretary **Marsh**. Before I answer that question, I would like to amplify on something General Meyer said.

The number of individuals affected by the combat ruling is slightly over 1,200. Of those, some 600 are coming up for reenlistment. They are maturing and we would estimate that normally we would have retained 158 without this policy.

Now, for the ones that want to stay in, we are making a very special effort to give them a preference on reenlisting and we are making a special effort to see that they have opportunities so that we can retain them. We think we will be successful.

In reference to your question on the impact of the pay freeze, I am of the view, sir, that there is less likely to be an impact on recruiting. If I were to look for an impact, I would look for it, sir, on retention as opposed to recruiting.

Senator **Proxmire**. It is a gamble, isn't it, that the depression will continue?

Secretary **Marsh**. I cannot tell you for sure what is likely to occur. I am of the view it is least likely to impact on recruitment.

If there is an impact, it will be on retention. If there is a catchup pay bill the following year, I don't believe there will be that significant an impact.

Senator **Proxmire**. Isn't the dominant fact that it is something beyond our control? If we have a brisk recovery, unemployment drops, won't that have an effect on your recruiting?

Secretary **Marsh**. I can't disassociate economic recovery from that and certainly we all hope we have an economic recovery.

I will say to you that the statistics on unemployment for the 18- to 20-year-olds have not changed for the last several years. Also, we are having as much success in our recruiting programs in the high employment areas as we are in the low employment areas.

In other words, we don't think the economy is the sole factor.

Senator **Proxmire**. Thank you, Mr. Chairman.

REENLISTMENT BONUS

Senator **Stevens**. Following up on that, Mr. Secretary, I note you have an increase in your reenlistment bonus concept.

The reenlistment bonus is more important for retention than the 4-percent pay increase for 1 year?

Secretary **Marsh**. It is my recollection that the reenlistment bonus was slightly down from the preceding year and the number of people to whom it was being offered was greater.

Senator **Stevens**. We show a 1983 funding of $58 million and a 1984 funding request of $106 million budgeted for reenlistment.

In any event, it would be my judgment that the reenlistment bonus is much more important than a 1-year 4-percent pay adjustment which is a cost-of-living adjustment rather than a bonus.

In any event, I am not going to argue that pay increase. I would like to have it be 15 percent again, but I don't think you can fund it when you are borrowing the money. All these young men and women coming into the Army are going to be the ones that pay the bill on that $1.2 trillion debt.

Do you know we are accumulating national debt at the rate of $60 billion a month now? That is how fast it is going up. It took us all of our history until last year to get to $1 trillion. We will have the next trillion dollars in 5 years at the rate we are going.

Those young fellows coming in will have to decide whether they want to pay off the second trillion as well as the first.

PERSHING TESTS

Let me turn to Pershing, Mr. Secretary. In the conference report last year we provided no funds for Pershing construction because of the tests. I understand there have been two tests?

Secretary **Marsh**. Yes, sir.

Senator **Stevens**. Has there been an overland test yet?

Secretary **Marsh**. I think that is going to occur sometime this week. The General says it is supposed to be tomorrow.

Senator **Stevens**. We indicated that we were committed to Pershing II. We put up money for the training of the missile crews and that Pershing II procurement fund may be requested by reprograming a budget supplement following completion of a full flight testing.

Is there going to be another test after this other one? Staff tells me there is a two-stage full flight still to come. Is that correct?

Secretary **Marsh**. I think that is correct.

General **Meyer**. There will be several one-stage tests at White Sands. You understand why they will be one stage. The current second stage problem does not have any operational impact. It's a question of test range safety.

Whether or not that is adequate to proceed will depend on the result of those tests. Eventually, we hope to go back to doing the two-stage overland test. The two-stage overland tests, however, are not required to certify missile performance.

FUNDING FOR PERSHING

Senator **Stevens**. We understand that notwithstanding what we have done, that no action has been taken to reduce the work under the existing contract, at least the expenditure of procurement funds.

How have you benefited if we didn't give you any money?

General **Meyer**. We have had to take money out of procurement, Army. We have gone up to the Secretary of Defense and explained to him what is going on. He has to be sure that he understands what impact that will have on other procurement if we don't get the supplemental or don't get reprograming.

Senator **Stevens**. That is not my question. We are going to approve the reprograming.

General **Meyer**. The money we are spending on initial procurement is from 1982 funds, sir. You authorized us to do that in 1982. You said don't do anything with 1983. It is out of 1982 that will permit us, if we are successful, to be able to deploy.

Senator **Stevens**. We can't procure it until we find out if it is going to be successful.

General **Meyer**. It is in the process of procurement, so we will be able to deploy it in November if we approve it.

Senator **Stevens**. We did not provide any money for procurement in 1983. It is clear we said no funds for procurement. I understand you signed a 1983 production contract for Pershing II to spend money from 1983 funds notwithstanding the fact that we have prohibited the expenditure of funds.

We did indicate we would approve a supplemental or reprograming following a successful completion of the test program for Pershing II which we all hope is successful. If it is not, we don't want to build the bird.

General **Davis**. Mr. Chairman, the fiscal year 1983 contract for Pershing II was signed on October 25 of this past year. The CRA prohibiting all Pershing II funds is now the fiscal year 1983 Appropriation Act enacted on the 21st of December of 1982, 2 months after we had already signed the contract.

The contract was signed on the basis that it was not a new start in fiscal 1983. It had been approved by the Congress in fiscal 1982. It had been approved by three committees of Congress, both authorization committees and the Senate Appropriations Committee in your first markup of the 1983 budget in September.

Consequently, the Army had no indication that there was any problem or any concern by the Congress on the Pershing II missile system.

Senator **Stevens**. Aren't your contracts subject to appropriation? They always have a clause in them, "subject to appropriation."

General **Davis**. The procurement contract was legally signed as an option of the fiscal year 1982 contract on October 25 with no provision in that contract, as there is not in most contracts on major systems subject to availability of funds or subject to appropriations.

Senator **Stevens**. You didn't have a 1983 bill. How could you spend money you didn't have?

General **Davis**. Under the continuing resolution authority which continued those programs that were funded in fiscal year 1982 and which were legally authorized under the continuing resolution authority that was enacted on the First of October.

SPENDING ON PERSHING II

Senator **Stevens**. I agree you could spend the 1982 money, but I don't think you could spend 1983 money. If you are spending 1983 money, I would like to have a legal opinion on how you are doing it.

General **Meyer**. I will see that you get the whole thing laid out from the lawyer's point of view.

[The information follows:]

PERSHING II

The Army General Counsel statement of legal authority of 24 January 1983 follows:

"The FY 83 production option for 91 Pershing II missiles was executed on 25 October 1982. Public Law 97-257 made continuing appropriations for fiscal year 1983. The provisions applicable to the Department of Defense stated:

> Pending passage of the regular Department of Defense Appropriation Act for fiscal year 1983, such amounts as may be necessary for continuing activities which were conducted in the fiscal year 1982, for which provision was made in the Department of Defense Appropriation Act, 1982, but such activities shall be funded at not to exceed an annual rate for new obligational authority of $228,700,000,000, which is an increase above the current level, and this increase shall be distributed on a pro-rata basis to each appropriation account and shall operate under the terms and conditions provided for in the applicable appropriation Acts for the fiscal year 1982....

Section 101(c), Public Law 97-276. Additionally, the following proviso was operative:

> Provided, that no appropriation or fund made available or authority granted pursuant to this paragraph shall be used to initiate or resume any project or activity for which appropriations funds or other authority were not available during the fiscal year 1982... and in addition, this limitation shall include the lower appropriation or funding ceilings for specific projects and activities set forth in the Department of Defense Appropriation Act, 1983, as reported to the Senate of September 23, 1982, or as subsequently reported to the House of Representatives....

Section 102 of the Continuing Resolution made appropriations and funds available from October 1, 1982 until enactment into law of an appropriation or until December 17, 1982, whichever occurred later. Further, secton 103 provided that appropriations made and authority granted pursuant to the joint resolution covered all obligation or expenditures incurred for any project or activity during the period for which funds or authority were granted such projects or activities under the Joint Resolution.

Applying the above provisions to the Pershing II situation, it is clear that ample legal authority existed to exercise the FY 83 Pershing II production option. The DoD Appropriation Act, 1982, Public Law 97-114 appropriated $2,131,200,000 for Missile Procurement, Army, without restriction as to Pershing II. The legislative history indicates that of the amount $191,800,000 was intended for Pershing production. Accordingly, Pershing II production was not a "new start" in FY 1983.

Additionally, the DoD Authorization Act 1983, authorized $2,846,600,000 for Army missiles without restriction. The Authorization Conference Report indicates that $498.3M of this amount was intended for the production of 91 Pershing II missiles. H.R. Rep. No. 97-749. The Senate Appropriation Committee recommended $2,611,600,000 for Missile Procurement, Army, of which $498,300,000 was recommended for Pershing II production. S. Rep. No. 97-580, 97th Cong. 2d Sess., 72-73. The Department of Defense Appropriation Act, 1983 (S. 2951), as reported to the Senate on September 23, 1983 was consistent with the above. S. 2951 provided $2,611,600,000 for Missile Procurement, Army, without restriction as to Pershing II. House Appropriation Committee action did not take place on or prior to October 25, 1982.

Pursuant to the authority of the Continuing Resolution, OSD released $498.3M to the Army for production of 91 Pershing II missiles on October 8, 1982. Thereafter, the Department of the Army further transmitted this release to its subordinate commands.

Based on the foregoing, therefore, legal authority existed for the exercise of the Pershing II production option on October 25, 1982.

The second Joint Resolution, Public Law 97-377, which also serves as the DoD Appropriation Act, 1983, appropriated $2.287B for Missile Procurement, Army with no statutory language applicable to Pershing II. However, the Conference Report denied funding for Pershing II production as follows:

> The conferees agree to provide no funds for Pershing II as proposed by the House, instead of $498,300,000 as proposed by the Senate. The conferees share the concern expressd by the House over concurrency in the program schedule, and agree that more test results are needed before additional Pershing II procurement funds can be justified. The conferees nevertheless remain firmly committed to modernization of the theater nuclear forces. To emphasize that commitment, the conferees agree to add $30,000,000 to the Operation and Maintenance, Army account for Pershing II engineering services, refurbishment of training missiles, and project SWAP. These efforts will ensure meeting the initial operational capability date of December, 1983 with the missiles and hardware funded in the fiscal year 1982 appropriation.
>
> The conferees agree that Pershing II procurement funds may be requested by reprograming or budget supplement following successful completion of full flight testing.

From a strictly legal standpoint, the Army has $2.287B for missile procurement, of which only $422.1M is statutorily earmarked (for MLRS procurement). The remainder of the $2.287B, a lump sum appropriation, is available for the procurement of Army missiles, and could technically be used to continue the Pershing II production contract notwithstanding the Conference Report language. The Comptroller General has opined that:

> When Congress merely appropriates lump-sum amounts without statutorily restricting what can be done with those funds, a clear inference arises that it does not intend to impose legally binding restrictions, and indicia in committee reports and other legislative history as to how the funds should or are expected to be spent do not establish any legal requirements on Federal agencies.

55 Comp. Gen. 307, 319 (1975). The following Comptroller General language further amplifies this point in the context of aircraft:

> If a statute clearly authorizes the use of funds for the procurement of "military air-

> craft" without restriction, it must be construed to provide support for the validity of procuring any such aircraft. The fact that the legislative history makes clear that one type of military aircraft rather than another is to be acquired does not restrict the unequivocal grant of authority carried in the statute itself. To be binding, as a matter of law, an intention to so restrict the legal availability of the funds provided would have to be expressed in the statute. However, if the issue is whether a particular aircraft is in fact a "military aircraft," as that term is used in the statute, resort to legislative history is required.

Id. at 325. Therefore, in that FY 1983 Missile Procurement, Army funds are available for Pershing II, the Army was not under a legal requirement to terminate the FY 83 Pershing II production contract."

PREFLIGHT PURCHASE OF AIRCRAFT

Senator STEVENS. You didn't have the right to obligate funds. This procurement can take place in October 1984, I understand. You are going not only 1 year, but all the way through on this program.

I don't see that. We had a right to say you are not going to buy any more of those birds until you fly them successfully. If you are going to buy them before that, I want a hearing, I don't want a legal memorandum, we will set up a hearing on it and let the country know how we can procure Pershing II's before they are being tested successfully. I don't think the public will like it one little bit. I don't like it.

General DAVIS. Once the Army understood the committee's direction on December 21 we informally took immediate action to limit further obligations by the contractor and thereby limit the liability to the Government. We have asked the contractor not to exceed $150 million for fiscal 1983.

Secretary MARSH. We will submit a supplemental request.

Senator STEVENS. I know that, but you still have not successfully tested this bird. We have a lot of fights to fight. If we start buying these things before they are tested successfully, we will start losing other fights.

This committee was in favor of it, don't forget, and we have fought for it against other people who are against it.

Secretary MARSH. We are aware of the support here for that program.

C-17 CARGO PLANE

Senator STEVENS. I notice in Defense Week, General, that the Army Operations Chief of Staff says he is tired of the Air Force's C-17. He charges the Air Force obsession with the C-17 cargo plane may adversely affect the Pentagon's ability to deliver the proper mix of forces to prospective world trouble spots. I wish they were obsessed with the C-17.

What is the story behind that memo?

General **Meyer**. I gave him an unsatisfactory on English, an unsatisfactory on logic, and an unsatisfactory on conclusion, because the memo that I have sent to the Chief of Staff of the Air Force indicated we wanted them to get on with this intratheater lift and that is the C-17. We believe we need it. The Secretary and I both can speak to that.

Senator **Stevens**. Give him unsatisfactory on timing, before your last appearance. I won't belabor that.

We have a series of questions that we will submit at the conclusion of the hearing, Mr. Secretary.

PRE-POSITIONING OF MATERIEL CONFIGURED TO UNIT SETS

Let me ask a question about POMCUS because our subcommittee took a tour, as you know, of the NATO European Command last fall. We were, and I think quite properly from their points of view, repeatedly asked by both our military and by the representatives of our NATO allies that were there why we had cut out sets five and six of POMCUS.

We directed the Army to prepare alternative plans for utilizing those storage sites.

Has that been done?

Secretary **Marsh**. Senator, perhaps General Meyer can also speak to this, but I am aware that there has been certain work done in reference to those possible alternate uses.

Senator **Stevens**. We understand there is an alternative request coming here rather than an alternative plan.

Are you going to request supplements for what was denied last year?

General **Meyer**. Defense is coming with a supplemental for the request that was denied last year.

Senator **Stevens**. The House criticized the concept of POMCUS because they thought we were taking money away from other units and before we could get POMCUS approved we would have to show those other units had all of their needs satisfied.

Can we show that in 3 months?

We were talking National Guard and Reserve units. We have one member of this committee who is not present who personally made the motion to delete that because of the lack of supplies for Army Reserve and National Guard units throughout the country.

General **Meyer**. It will have an impact upon equipment for the rest of the Army if equipment is prepositioned overseas.

Senator **Stevens**. This is distinguished from the other programs whereby we would have furnished supplies to our NATO reserve?

HOST NATION SUPPORT

General **Meyer**. Host nation support.

Senator **Stevens**. Are you going to ask for that money, too?

General **Meyer**. That is coming over in a supplemental from Defense.

Senator **Stevens**. Again we turn into advocates. Why do you do that to us? Time has passed and nothing has been done to meet the arguments that we were confronted with last year.

Now we are going back to the wall to fight again and nothing has been done. When we were in Europe we found that host nation support, under their concept over there, the Reserves take their guns home, the Reserves take their trucks home.

One of the people with us said, you know, we don't do that here. The farmers out in the Midwest don't take the trucks home and use them on their farms. They do over there.

Do you think that is going to get through in this country with the farm prices the way they are?

General Meyer. In all fairness, I don't believe the trucks that will equip those 93,000 Germans who will support both the Army and Air Force units over there, would be in the same category as the trucks that we currently get from host nation support.

The trucks we currently count on in war from host nation support are civilian trucks used to haul beer from Bamberg up to Schweinfurt or go out to haul from the fields which would be diverted to support us in wartime.

Senator Stevens. If that is the case, you ought to correct the impression we got, that is, the way they are to be used.

General Meyer. The ones you are talking about are military vehicles to be used on a permanent basis by German units which will be available in war.

Senator Stevens. They will not be available for any personal use?

General Meyer. No, sir.

Senator Stevens. It will be handy to have that information if we are going to go to the wall on that one.

M-1 TANK PRODUCTION

I want to get into M-1 tanks. We have a problem.

Senator Proxmire asked the question about that reprograming for M-1 tanks.

In the conference report in the 1983 appropriations bill we limited M-1 tank production to 60 tanks per month. My memory is that we have 1,700 in 1982 and you are asking for 835 or something like that now, but you are coming back down to 720 in 1984. Now you want to ask to reprogram more money to build even more tanks in 1983.

With the M-1 tank cost going up the way it is, why are you taking up the production like that in 1983 and bringing it down in 1984?

We went along when you increased the total rate of production over the years, but this is going to make the M-1 cost more. I don't understand that.

Secretary Marsh. We think this will probably reduce the cost. The reason we did not ask for a production rate of 90 as opposed to 60 is an affordability one. We would have liked to ask for 90, but we could not afford to do that.

Senator Stevens. Why are you producing 835 now as compared to 700 last year?

It is going down to 700. We have always been told when you come down like that it will increase the cost.

Senator **Marsh**. We have reprogramed for these 35, because we think that it will enable us to realize some savings.

Senator **Stevens**. We can't believe that because you are going to add them to the 855. You have already realized the saving from production. I think you had better give us a piece of paper on that.

General **Davis**. Mr. Chairman, the 35 additional tanks in that reprograming action is a fiscal year 1982 reprograming action. Those 35 tanks are included within the 700 tanks that are shown in the authorized column for fiscal year 1982. It is not an 1983 action at all.

Senator **Stevens**. Aren't they physically being turned out next year?

General **Davis**. The fiscal year 1982 funded delivery period, Mr. Chairman, runs into February of 1984.

Senator **Stevens**. And the production rate, the unit production per month rate is going to vary if we approve that, but the budget we have in front of us automatically brings it down anyway. You are going to lift it up 35 more and bring it down even more precipitously in 1984 at an increased unit cost in 1984 to do that, the way we have been taught in the past.

General **Davis**. The fiscal year 1982 authorized column of 700 tanks for fiscal year 1982 was based on the supposition that this 35-tank reprograming action would be approved.

Consequently, if these 35 tanks are not approved in this reprograming action, we are down to 665 M-1 tanks for fiscal year 1982, not 700.

Then you will have a steeper ramp. You would be going from 665 up to 855 rather than 700.

Senator **Stevens**. Why don't you take it out of the 855 then and move that back rather than take it out of some other function?

We have 855 for 1983. You want 35 more in the 1982 column, move them over from 1983 because you are still going to come down to 720 next year. I still don't understand this from the point of view of unit production economics.

I would like to have more explanation.

General **Davis**. We will provide more information.

[The information follows:]

M1 Tank Program

The M1 production profile for fiscal years 1982, 1983 and 1984 production will average 62, 67 and 60 tanks a month, respectively. The foreign military sales reprograming of $65.2 million will add 35 tanks to the fiscal year 1982 buy, but these 35 additional M1s will not change the fiscal year 1982 funded delivery period production rate. Approval of the reprograming will simply extend the fiscal year 1982 funded delivery period from eleven to eleven and one-half months.

M1 production is proven at 60+ a month and the army can easily add these 35 tanks to the fiscal year 1982 program. Significantly, approval of this reprograming will also provide the Army partial recoupment of the tanks sold from inventory for this foreign military sales case. This recoupment will recognize the principle of like-item replacement when assets are sold from inventory. Putting the funds into the M1 program will allow faster modernization of the United States tank fleet while reducing the new appropriations required to execute the M1 program.

WOMEN IN COMBAT

Senator **Rudman**. I am sorry that my friend from Wisconsin, Senator Proxmire, left. I don't agree with his point of view. I agree with General Meyer, I don't think the Army can lead in some of the areas of equality that my friend from Wisconsin was addressing.

I don't think the American people would be very much in favor of your deploying infantry units and forward fighting units, recon units, ranger units with women. It is not an issue of whether they can do a good job or not. I don't think the American people are ready for that.

I think the country would be in an uproar if women were in positions where they could be captured or killed in great numbers. Maybe that is convoluted thinking. I have no doubt it would appall the country.

I think you are precisely correct in what your policy has been. I think you can give women far greater opportunities in the Army than they have ever had before.

General Davis, I think I want to address this to you. I have been reading this document which is in some way like a Sports Illustrated swimsuit issue, not as interesting, but probably more revealing. I don't understand some things in here.

LEARNING CURVE IN PROCUREMENT

We keep hearing a great deal about the learning curve in procurement and the theory is that as contractors learn the system, then of course the costs come down and it helps to counter inflation.

Secretary Weinberger told us yesterday that the Governmentwide estimate for inflation is around 5 percent and if you project that together with what we normally assume learning curves to be, I wonder how smart people are being in how they are buying over there. This is not just the Army, but you happen to be here this morning.

Let me give you a couple of figures and ask you about them.

STINGER

Stinger, a first-class weapon system. We need them. We ought to buy as many as we can afford to give the forward units complete, close and excellent defense.

1982, 2,544 units at a cost of $75,000 per unit.

1983, 2,256 units, about the same, the cost is up to $95,000.

1984, 1,638 units, a drop in quantity, but the learning curve should be operating, a cost of $110,000.

1985, back to 2,500 units, the cost up to $128,000.

TOW

Let me go to one other item, the TOW. TOW in 1982, 10,000 units, also an excellent weapon, one we need and one I support, $10,000 a unit. For 12,000 units the price goes up next year to $12,000 a unit. It stabilizes the following year and goes up again in the last year.

How hard are we negotiating with these contractors? How tough and how smart are the people out there compared to what their counterparts might be in industry?

General **Davis**. Senator Rudman, I suspect you already fully realize, particularly in regard to your last question, that sometimes our contracting experience is not as accomplished in many cases as those in industry. However, great strides have been made in my judgment.

I would certainly have to provide some additional information to you on the question of the learning curve particularly, but I would say there have been great strides in DARCOM to enforce our ability to be able to contract better with industry and to provide more training for our contracting officers, to provide a contracting officer career field that would make them a more experienced part of the Army.

You don't grow contracting officers overnight. It does take time. We are working with the DARCOM and trying to make our contracting officers much more experienced.

Senator **Rudman**. I would appreciate it, Mr. Secretary, if you for the record, or even after the record closes, informally could give me some information, not only on those two items, but on several others.

[The information follows:]

Tow2/Stinger

The fiscal year 1982 price of TOW2 missiles was approximately $9700. The fiscal 1983 unit price of TOW2 is expected to be finally negotiated at approximately $9950. The unit price of TOW2 missiles is stable and appears to be following the expected learning curve. Some adjustments between the TOW2 missile line and the TOW ground equipment are required to properly show the dollars associated with TOW2 missiles.

The fiscal year 1982 buy was for 2544 basic Stinger missiles at a flyaway cost of $54,597 per unit. The fiscal year 1983 buy is for 2212 basic Stinger missiles at a flyaway cost of $55,266 per unit. The fiscal year 1984 estimated flyaway cost for the basic Stinger is approximately $61,500 per unit for a total of 993 units. The fiscal year 1985 estimated flyaway cost is approximately $130,000. This is based on the procurement of 2610 Stinger-POST systems. Stinger-POST provides improved capabilities over the basic Stinger system.

WEAPONS COSTS

Senator **Rudman**. One of the problems we have here, those of us who are strong advocates of doing the things you want to do, is this kind of information is very damaging. It leaves you open to great criticism; quite frankly, I look at some of the balance sheets of some of the defense contractors and it seems to me that in some of these areas the American people are paying more for good weapons than they should.

When I look at a unit cost on Stinger, and I am very familiar with its operation and I am familiar with its technology, it is nothing that is really high technology now, it was when it was invented, a very effective weapon, but essentially nothing that really should go from $75,000 a copy in 1982 to $128,000 a copy in 1985, assuming no learning curve and assuming standard inflation rates.

I would just ask if that might be looked at because I think they are examples of the kind of things we are having trouble with.

SELECTED ACQUISITION REPORTS

Secretary **Marsh**. Let me mention one thing to you. I will give you a chart which shows 12 of our major weapon systems that have to be reported on the selected acquisition report.

We have tracked these 12 systems for 4 years. These 12 systems show a jump of $19 billion in 1979 on a $52 billion base.

In 1981 there was a jump of only $8 billion as opposed to the $19 billion in 1979.

In 1982 there was a jump of only $169 million with all systems lumped together. This is a two-tenths of 1 percent increase. I can't say that this is a trend, yet.

I can say that we hope it is an indicator. There are a lot of other factors that go into this. But, I think it does indicate some significant efforts are being made to get a handle on costs. I would give a significant amount of the credit to Jim Ambrose, Under Secretary of the Army. That is the area in which he works.

[The information follows:]

SELECTED ACQUISITION REPORTS (SARS)

[Current dollars in millions]

	December 1979	December 1980	December 1981	December 1982
Programs which have been reported for all 4 years:				
AH-64	5,454.3	6,598.6	7,380.8	7,369.9
AN/TTC-39	812.7	915.6	1,029.3	1,182.5
Blackhawk	5,722.3	6,580.5	7,833.5	7,384.4
CH-47 MOD	2,082.5	2,619.9	3,154.9	3,282.5
Sgt York Gun	3,801.5	5,109.3	4,133.6	4,124.4
Bradley FVS	7,443.8	13,147.3	13,399.3	11,797.4
Hellfire	986.8	1,653.4	2,047.6	2,231.5
MLRS	3,818.8	4,223.4	4,136.9	4,197.0
Patriot	6,134.0	8,323.2	10,709.2	11,680.7
Pershing II	1,683.9	1,825.6	2.812.4	2,737.6
Stinger	1,570.4	1,878.5	3,795.6	3,807.8
M1 tank	12,525.9	18,955.2	19,574.2	20,379.9
Total	52,037.0	71,831.0	80,007.0	80,176.0
Difference		(19,794)	(8,176)	(169)

CIVILIANS IN COMMAND STRUCTURE

Senator **Rudman**. Let me suggest to you respecting General Davis' comment which I agree with, I think strong consideration ought to be given to putting some very high-grade management personnel, civilians, in charge of these programs who will be there a long time who won't worry about the fact they are out of the command structure.

We all know if you are out of the command structure, no matter how good a job you do, you can manage the most successful weapon system in history, but you will never command a brigade in Fort Bragg.

Why doesn't the Army take lead and put some of your top civilian grade people in charge of these procurement programs? Maybe have the Army take the lead in showing how procurement ought to be done in this Government rather than always seeming to be on the end of getting a beating at these hearings.

General **Meyer**. On the Stinger and TOW there are significantly improved capabilities in the 1985 buy over what we were procuring in 1983. Part of it is improved capability. It is not just more of the same.

That does not negate your argument. Your argument is still valid. We are looking at the civilian issue. What we have done is to make it possible for officers to be promoted to general in the procurement field. So, we do have upward mobility.

Senator **Rudman**. You will admit it is a hard track.

General **Meyer**. It is a hard grind to put an officer there and keep him there. But, it detracts from the effectiveness of contracting when you change them from year to year.

Senator **Rudman**. Thank you, Mr. Chairman.

I hope you will look at that.

Senator **Stevens**. Thank you, Mr. Secretary, General Meyer, and General Davis.

SUBMITTED QUESTIONS

We do have questions coming in from other members.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

SUBMITTED QUESTIONS

NATO TROOP STRENGTH

QUESTION: Is the Army planning any substantial force increase in Europe in 1984? If so, to what extent.

ANSWER: The Army 1984 programed strength in Europe reflects no significant growth from the programed 1982/1983 level. The budgeted Army 1984 force in Europe is 217,800. This level of authorization reflects the Army decision to hold growth by making internal trade-offs to pay for increased force capability and force modernization.

Significant force structure changes programed for Europe in 1984 include transition to Division 86 unit designs in the forward deployed heavy divisions, increasing manning levels of selected units to reduce hollowness and deployment of PATRIOT to increase our air defense capability. To offset these improvements and other higher priority readiness initiatives we have programed the inactivation of the 4th Bde, 4th Mech.

NATO TROOP SUPPORT

QUESTION: What impact, if any, has the Army experienced as a result of the restriction in the 1983 appropriation halting the growth of U.S. military personnel stationed in Europe.

ANSWER: The Army's distribution of personnel to Europe is targeted nine months in the future. From a personnel perspective, the temporary restriction has caused serious disruptions to the orderly flow into and out of Europe. While the personal inconveniences caused soldiers and their dependents are difficult to measure, they are real and significant nonetheless. Should the restrictions continue into FY 84, keeping in mind that we are already assigning people for the Dec 1983 time frame, we fully expect extreme difficulty in achieving our programmed efforts to transition to Division 86 and introduce new major items of equipment without degrading readiness. Moreover, to accomplish these objectives and still maintain readiness under these restrictions, it may become necessary to require force structure reductions in the NATO arena.

Budget Adjustments

QUESTION: This year the Army and other services were required to take last minute reductions in their budget estimates to achieve some $8 billion in outlay savings. What was the size of the Army's reduction and how was it allocated among pay, inflation and programs?

ANSWER. The outlay reduction for pay was not distributed to the Services. Therefore, the Army outlay reduction for pay cannot be addressed. The Army outlay reduction for inflation was $322.2M. The Army outlay reduction for programs was $102M.

DIVISION 86

QUESTION: Can you tell a little about your "Division 86" concept? How many armored or mechanized divisions will be converted to the Division 86 configuration in fiscal year 1984?

ANSWER: Division 86 is the new force design for armored and mechanized infantry divisions. The new designs integrate the impacts of new systems, changing threat capabilities, changing battlefield concepts and resource constraints. The net result is improved operational effectiveness of units and optimal combat effectiveness of existing and new systems. The designs also provide an enhanced capability for continuous combat on a conventional or an integrated (nuclear, chemical and electronic warfare) battlefield. Highlights of the design changes are: More, smaller, less complex tank and infantry companies (the number of companies per battalion increases from three to four); artillery batteries have been given the capability to split into two sections, while one fires, the other moves thus increasing their survivability; the command and control of aviation assets within our divisions has been improved by the creation of a Cavalry Brigade (Air Attack) to manage all aspects of Army aviation; air defense capabilities have been increased with the addition of more gun systems; and the divisions have been given a capability to rearm, refuel, provide provisions, and fix weapons system at the forward edge of the battlefield. The full wartime manning requirement for a division has at the same time remained constant.

Like-type units convert to these new designs during short periods of time, hence, the majority of active armored and mechanized infantry divisions as well as heavy portion of the 2nd Infantry Division will have converted to Division 86 configurations by the end of fiscal year 1984.

QUESTION: When will all of the armored and mechanized divisions be converted to the new table of organizations and equipment?

ANSWER: The conversion to the new table of organizations and equipment is a two step process; the first step calls for the conversion to the new designs with existing type equipment, the second step is to add new items of equipment and capabilities as they become available. All divisions will have completed the initial step by the end of fiscal year 1985. The second portion of the process will not be completed until the early 1990s for the active component and is not currently programed for reserve component divisions due to limited procurement quantities for major weapon systems.

QUESTION: Are the deliveries of modernized equipment the dominant factor influencing the pace of conversion? If so, how will the reduction in the planned procurement of the Army's M1 tank from 90 per month to 60 delay the reorganization of the heavy division?

ANSWER: Deliveries of equipment items are one of the key factors influencing the pace of conversion, others are facilities availability and manpower availability. The reductions in procurement of weapons systems lengthen the time period over which a type unit will have mixed equipment types. The reductions mentioned would lengthen by one third the period of time required to fill the planned number of M1 equipped Armor battalions.

QUESTION: As compared with the current heavy division, what additional costs are associated with the Division 86 structure? How many additional personnel are required to man the new heavy division?

ANSWER: As compared to the wartime requirements of the current unmodernized heavy division the new fully modernized design is the same size. The current division's size would have grown by over one thousand if this major redesign had not taken place.

The current division's units are each manned at a reduced strength creating "hollowness". When units convert fully to the new designs they will be manned at full wartime requirements, manpower constraints being satisfied by placing whole units rather than individuals into the reserve components. When fully converted to the new designs with modernized equipment, the divisions will be authorized between 200 and 1000 additional persons depending upon the number of roundout spaces in that particular division.

The new divisions designs do have an increased number of officer and NCO spaces due to more, smaller and a less complex company, the addition of more weapons systems, provision of better planning staffs for continuous operations.

Because Division 86 looks at the sum total of the Army's modernization program, it is difficult to separate those costs which are related strictly to the new force designs. The Army has identified as Division 86 cost, those costs related to design changes, changes in manning levels and previously unrecognized costs which have become evident. These costs include operations and support costs for support items of equipment not required by any one system but by the net effort of several; cost to operate more companies; and facilities required to meet existing shortages, for modernization of organizations and to take care of the effects of multiple systems on an organization (e.g., one system may require two mechanics with new or different skills, this number would not create a demand for facilities). Division 86 has let us forecast and program for the combinated effect of many such systems as well as organizational changes.

QUESTION: Are there any construction requirements to provide support to the reorganized battalions?

ANSWER: Yes, there are construction requirements needed to support the reorganized battalions at Forts Hood and Riley in the FY 84 MCA program. A list of the facility requirements is as follows:

Installation	PN	Description	Program Amt
FY 84			
Ft Hood	0475000	Tactical Equip Shop-Div 86	8,400
Ft Hood	0476000	Tactical Equip Shop-Div 86	8,200
Ft Hood	0483000	Brigade Headquarters-Div 86	1,250
Ft Riley	0285000	Tactical Equipment Shop	5,000
Ft Riley	0318000	Barracks	6,300
Ft Riley	0363000	Co Admin & Supply-Div 86	1,700
Ft Riley	0373000	Co Admin & Supply-Div 86	2,150
Ft Riley	0379000	Tact Equip Shop-Div 86	1,200
Ft Riley	0380000	Co Admin & Supply-Div 86	1,500
Ft Riley	0381000	Brigade Headquarters-Div 86	1,400
Ft Riley	0382000	Maint Hangar w/Ops Fac-Div 86	8,100
Ft Riley	0383000	Tactical Equipment Shop	3,950
Ft Riley	0384000	Bn Hq & Classroom-Div 86	1,200
Ft Riley	0386000	Bn Hq & Classroom-Div 86	1,200
Total FY 84			51,550

Pershing II Funding

QUESTION: If Pershing II funding is not provided by Congress by late May, what 1983 programs will be reduced as bill payer and by how much?

ANSWER: If Pershing II procurement funds are not provided to the Army by 15 May 1983, we will terminate fiscal year 1983 production. At that time the Army will have incurred an FY83 liability not to exceed $150M. Specific bill payers for this liability have not been identified as yet. However, the magnitude of this bill this late in the fiscal year will have significant adverse impacts on a number of Army programs/accounts.

QUESTION: To reduce the cost of Army modernization by $6.4 billion; but still achieve a significant increase in capability, an option may be to defer the DIVAD gun and Attack Helicopter Improvement Program procurements. What is the Army's assessment of this option?

ANSWER: To defer the DIVAD Gun program would seriously jeopardize our heavy division's ability to fight in the forward area. DIVAD provides the air defense coverage for our forward manuever units. The present system (VULCAN) is inadequate to meet the modern threat. The DIVAD gun program has been developed using an accelerated acquisition strategy which featured competition for production. We have a fixed price incentive contract with three production options. To defer DIVAD would not only leave the soldier with inadequate air defense protection, but from a business sense we would forfeit all the advantages of this competitive development. Cancellation of AHIP will seriously impact the effectiveness of the planned force structure during wartime. AHIP is an essential element of the scout/attack team. It provides the AH-64 attack helicopter with the operational flexibility of firing HELLFIRE missiles from protected positions. This flexibility has a force multiplier effect by permitting the attack helicopter to seek and destroy targets of opportunity while reducing scout/attack team losses. Without AHIP, the Army would be required to operate with an aging OH-58 aircraft fleet with no laser designation capability, a target acquisition capability limited to ranges achievable by the binocular aided human eye, virtually no night/adverse weather capability, and significant performance limitations.

In addition to the target acquisition and designation role, which is important, the AHIP Scout must also perform the functions of command and control, field artillery observation and laser designation for precision guided munitions, reconnaissance, surveillance, and security. In terms of frequency of occurrrence, the command and control function takes up more of the scout's time than any one of the other functions; however, recent threat analysis has placed more emphasis on the security function, particulary security of the scout/attack team from air-to-air threat weapons. In this regard, funds have been included in the FY-84 budget to commence the development of an air-to-air self defense system utilizing the Stinger missile.

AHIP is not being developed as an interim aircraft, but as a scout helicopter which can operate with the Army's attack helicopters and field artillery units past the year 2000.

The Army is considering development of a scout/attack version (SCAT) of the conceptual Light Helicopter Experimental (LHX) which could be available in production quantities around the mid or late 1990's. However, the current need for a night/adverse weather scout will not allow us to wait for LHX-SCAT to provide this capability. LHX will replace the aging OH-58 (except AHIP), OH-6, UH-1, and AH-1 aircraft and will augment and complement the AH-64, AHIP Scout and UH-60. The SCAT version of LHX will be procured to offset a serious short fall in scout/attack aircraft in the 1990's and beyond. AHIP will not be obsolete when LHX comes along, but will operate with LHX in a high-low mix. The AHIP would remain a critical aeroscout asset until well beyond the year 2000 probably until service life extensions of the AHIP were no longer practical.

AIR DEFENSE

QUESTION: The option assumes that the Vulcan air defense gun could be used in lieu of DIVAD fund procurements. What are the advantages and disadvantages of this proposal?

ANSWER: The Vulcan system cannot be used in lieu of DIVAD because it cannot perform the mission. Vulcan does not have either the range or reaction time to meet the threat which DIVAD will face. The only advantage to using Vulcan or the product improved VULCAN in lieu of DIVAD is that the cost is much lower. The penalty is too severe to justify the cost saving. Leaving our forward maneuver forces with inadequate air defense coverage is not something we can afford to trade-off.

QUESTION: General Meyer, the Army is proposing to start a new program, the Product Improved Vulcan Air Defense System. It was our understanding the Vulcan 20mm gun was to be replaced by the Division Air Defense (DIVAD) Gun; at least that's what the Secretary of Defense's Annual Report said. Does this mean the DIVAD is no longer needed?

ANSWER: No. The efforts we are making to upgrade VULCAN are being done to provide a better interim system for our light division while we examine alternatives for a new light-weight air defense system for these divisions. Additionally, the product improvement for VULCAN will provide a better system for our National Guard and Reserve forces when VULCAN transitions to their units in the mid to late 1980's. DIVAD is needed because VULCAN even in its Product Improved version is not adequate to meet the threat in the heavy division area.

QUESTION: If both systems are to be retained, how and where will the Product Improved Vulcan Gun be employed? Will it be necessary to increase Army end strength to man these units and systems?

ANSWER: The DIVAD Gun is to be deployed only in the heavy divisions, to include the 2d Infantry Division, the three non-divisional short range air defense battalions, the armored cavalry regiments, and the separate heavy brigades. The Product Improved Vulcan Gun will be employed in the light divisions as an interim light air defense system and in the Army National Guard (as DIVAD Guns displace Vulcan in the active component) where it will replace the Duster air defense gun. It will not be necessary to increase Army end strength to man these units and systems.

QUESTION: What is the sunk cost of the DIVAD program as of the end of fiscal year 1983?

ANSWER: The sunk cost for DIVAD by the end of fiscal 1983 is approximately $1.3 billion. Additionally we would need to provide support costs for the 146 systems which will have been procured.

QUESTION: What would be the impact of terminating the DIVAD program in light of your initiative to product improve the Vulcan air defense gun?

ANSWER: The decision to product improve the Vulcan air defense gun was not related in any way to the DIVAD gun. The Product Improved Vulcan Gun is not comparable to the DIVAD; however, because of its relatively light weight it is a candidate for an interim solution to the requirement for a light weight air defense system for the light forces. Termination of the DIVAD program would leave mechanized and armored forces without adequate protection against attack helicopters and fixed wing aircraft. The DIVAD has the rapid reaction, all weather capability, armor protection, mobility, and increased firepower necessary to provide protection against the threat facing the armored and mechanized forces; the Product Improved Vulcan is not an adequate substitute to fulfill that role with the heavy forces.

QUESTION: The DIVAD gun has been under examination due to reliability, maintainability and durability (RAM-D) problems. Do you have any preliminary results from the Aberdeen Proving Ground tests?

ANSWER: The DIVAD system has been involved in various forms of testing to include RAM-D testing since the prototypes were initially delivered in June 1980. The Army had hoped to conduct a formal RAM-D test at Aberdeen during the June - October 1982 time frame. It became clear to our test agencies early in the test preparation cycle that the condition of the one prototype available for testing would not allow completion of the goals and objectives we desired. A decision was made to curtail formal RAM-D scoring and complete the objectives without RAM-D scoring. This decision was reached because we found that we would be attempting to obtain reliability data using a prototype unit which has over two years of testing, does not include many of the corrections which will be incorporated in the productions unit, and did not have sufficient spare parts to support a timely accomplishment of testing. The DIVAD system has been developed using an accelerated acquisition strategy. It has always had concurrency between testing and production. This concurrency has associated risks, but the Army believes the savings in time and money make this worthwhile. Although formal test results from Aberdeen were not collected we feel the program is progressing in a satisfactory manner. We have taken additional steps to ensure that the production units meet the reliability requirement. We have increased our efforts in subsystem qualification tests, added additional RAM-D testing early in production, and above all we have reliability goals in our present contract which require the contractor to deliver a system that meets the reliability goals or retrofit the systems at his expense. We are confident the system will meet its goals.

QUESTION: No funds have been budgeted for further DIVAD research and development. What happens if the test results reveal that further work is required?

ANSWER: The research and development for the DIVAD Gun system has been completed with our FY83 funds request and our reprogramming request for FY82. We have a very favorable contract with Ford Aerospace which provides that the contractor delivers a system that meets our specifications or he retrofits the system to meet those specifications at his expense. This does not mean that should the need arise to provide DIVAD with some additional capability we would not conduct an effectiveness analysis to determine if the increase in capability justified the costs involved. Those costs could include RDTE funds in future years.

QUESTION: Do you intend to delay the award of the second increment of the procurement contract pending test results as recommended by the GAO?

ANSWER: The General Accounting Office recommended that the Army conduct a thorough assessment of the program prior to awarding contract option II. The Army plans to conduct that assessment and further plans to present that assessment to the Under Secretary of the Army for a decision prior to executing the second option.

Patriot

QUESTION: General Meyer, I noted in one of the 1984 procurement tables that the 1983 Patriot missile buy has been scaled down from the 1983 Congress funded. Why has this program been reduced in 1983?

ANSWER: Patriot fiscal year 1983 missile quantities were reduced from 376 to 287. This decrement was caused by a $35.1 million congressional reduction, $805.1 million to $770.0 million. Congressional language stated that $26.0 million was reduced from Patriot because of an Army decision to delay procurement of antiradiation missile decoys for which the $26 million had been requested. The Army did decide to delay procurement of antiradiation missile decoys, however, in the March-April 83 time frame, after the fiscal year 1983 budget had been submitted, a new Patriot baseline cost estimate was completed which indicated a fiscal year 1983 shortfall of $39 million. The plan to fund this shortfall was to use the $26 million previously programed for antiradiation missile decoys and to delay some integrated logistics activities for the remainder. When the Congress reduced the $26 million, the program had to be descoped to offset the shortfall. The remainder of the $35.1 million, $9.1 million, was Patriot's portion of an industrial research and development reduction by Congress.

QUESTION: What is the impact on your modernization program of this slowing of the Patriot program?

ANSWER: The reduction of 89 missiles in fiscal year 1983 will not have an impact on European deployments. Missiles have been reallocated to slow the fill of command stocks designated for Patriot units deployed in the United States.

ARMY AIRCRAFT

QUESTION: Secretary Marsh, last year we added bill language to permit you to come back to the Congress for permission to enter into a multi-year contract on the CH-47 Modification Program. Do you intend to seek that approval and, if so, when?

ANSWER: Multiyear contract negotiations are underway and expected to be completed by mid March. The Army will then evaluate the results, and if the savings and benefits are appropriate, Congressional approval will be requested.

QUESTION: The House Appropriations Committee Report directed the Army to qualify the BLACK HAWK helicopter to launch the HELLFIRE missile. Upon successful completion of that qualification program, how do you intend to utilize that new capability?

ANSWER: Use of the BLACK HAWK in the attack role was carefully examined by the Department of the Army Staff, the Training and Doctrine Command, and the Development and Readiness Command, and the Army does not consider this a feasible option. The BLACK HAWK helicopter is being procured to meet utility requirements. To use it in the attack role would require procurement of additional aircraft.

Qualification of autonomous HELLFIRE on the BLACK HAWK would require about $231.2 million in RDTE funding over a three year test period. Aircraft modification would include the installation of a target acquisition system, a laser designation system, a fire control panel, and the necessary electronics to successfully launch and guide the missile to the target.

Qualification of the nonautonomous mode would require between $63 and $73 million in RDTE funding over a 28 month test period. Qualification in this mode would provide a BLACK HAWK capable only of carrying and firing HELLFIRE missiles with target acquisition and laser designation provided by other aerial systems or remote ground designators.

From the basic BLACK HAWK design standpoint, the battlefield survivability and detectability of the BLACK HAWK do not meet the requirements of an attack helicopter. Funding for survivability enhancements are not included in the qualification cost estimates stated above. In fact, some of these survivability and detectability characteristics cannot be designed into the BLACK HAWK.

The Army has not requested funding to support HELLFIRE qualification on the BLACK HAWK in the FY 84 Budget request, and the Army does not consider the expenditure of funds to support this effort to be a prudent use of scarce resources.

POMCUS

QUESTION: For the last two years Congress denied funds for POMCUS prepositioning equipment sets 5 and 6 in Europe and directed the Army to prepare alternative plans for utilizing these storage sites. What alternatives have been explored?

ANSWER: The Army has examined several alternatives which include the movement of POMCUS overflow in CENTAG to the new storage sites, storage of war reserve stocks, and movement of one of the CENTAG POMCUS division sets to NORTHAG. Whatever alternative is selected, notification of a change in plans must be provided to NATO since they are the technical owners of the sites.

Question: Secretary Marsh, the House originally criticized the POMCUS concept because it was felt that equipment would be taken away from existing units. If your supplemental request were approved, can you guarantee that equipment will not be diverted from existing units?

Answer: The Army has no plans to withdraw equipment from Active Component or Reserve Component units to fill POMCUS. The fill of POMCUS is accomplished by new procurement, rebuild programs, and redistribution of equipment in accordance with DAMPL priority.

Question. As best as we can determine, you have not received any additional funding to support the procurement of additional equipment for POMCUS sets 5 and 6 and that the equipment for sets 5 and 6 will be taken from existing units and from your modernization program. Is that correct?

Answer. No, that is not correct. The Army is not procuring equipment specifically for POMCUS sets 5 and 6. All equipment requirements are included in the Army Acquisition Objective (AAO). The Army procures to meet the AAO. Although POMCUS is a subset of the AAO, there is no specific authorization or funding to procure POMCUS. POMCUS is filled by decrementing those war reserve assets other than the prepositioned requirements. Items programmed for procurement in FY84 will, for the most part, be delivered in the FY86/FY87 time frame and be distributed by The Army Equipment Distribution Program (TAEDP) based upon Department of the Army Master Priority List (DAMPL) priorities in existence at the time the materiel is received. Authority to transport equipment for sets 5 and 6 has not been included in the FY82 or FY 83 Defense Appropriations Acts. Equipment for these sets will not be taken from existing units.

M1 Tank Program

QUESTION: It appears that the previous Administration's program for fiscal year 1984 actually proposed procuring more than 100 additional M1 tanks than does the current 1984 budget. Please explain why the Army's is reducing the procurement of the M1 tank--the centerpiece of your modernization program.

ANSWER: The Army must provide for all its resources within a fixed total obligation authority (TOA). Our priorities have not changed but our total obligation authority has forced the Army to restrict tank production as well as restrict other programs so that a balanced force which makes full use of all its capabilities can be maintained.

QUESTION: Last year the Committee directed the M1 production be held to 60 per month until the promised RAM-D test is completed and durability requirements have been demonstrated. What is the status on that test and when will the test results be available?

ANSWER: The original powertrain durability test was suspended in September 1982 after M1 turbine engines failed because of quality control problems on the production line. The failures were not design related and had not been experienced in previous testing. Since then, the Program Manager, M1 has been working closely with the producer (AVCO Lycoming Division) to help them overcome these problems. The producers quality control system has been restructured and improved. PM, M1 and AVCO have been intensively monitoring production engines closely for several months to be sure that the process in producing engines of sufficient quality is established. Once PM, M1 is sure of this by random test and inspection, a decision will be made to resume the powertrain test. All indications now are that this can occur in August 1983. If so, test results should be available by February 1984. (It takes at least six months to put the necessary mileage on the test tank). Preliminary results should be sufficient to show whether or not the M1's powertrain has met the requirement (A .5 probability of the engine, transmission, and final drive travelling for 4000 miles (four years of life) without replacement) prior to deliveries of the fiscal year 1983 funded tanks, now planned for first deliveries in February 1984.

QUESTION: If these test results are not available prior to committee mark-up in June, what would be the impact of effectively restructuring the 1983 and 1984 tank program to establish a 720 tank per year production rate?

ANSWER: If the program were restructured in fiscal years 1983 and 1984, there would be no advantage to the Army. Contracts for fiscal years 1982 and 1983 are simultaneously being negotiated and should be ready for award by the end of March. There is essentially no time remaining to introduce a revised program at this time for fiscal year 1983 without incurring additional costs and delays. Though the numbers may appear as if production would be erratic, the actual monthly build rate only varies by 7 tanks. In fiscal year 1982, the production rate is 62 per month for 11 months. If a proposed reprograming is approved for 35 tanks in fiscal year 1982 then the funded delivery period will be extended from 11 to 11.5 months to account for this increase. In fiscal year 1983, the monthly production will be increased to 67 tanks per month for slightly less than thirteen months and in fiscal year 1984 the rate will be reduced to 60 tanks per month for twelve months.

A reduction in fiscal year 1983 would stretch the program further, increasing the program cost, and still not providing any benefit to the Army.

High Technology Light Division

QUESTION: How much R&D funding is in the FY 1984 budget request for High Technology Light Division (HTLD) programs? Has the Army been able to fully fund all of its procurement and R&D programs for the HTLD in the FY 1984 budget? Will the Army be asking again for FY 1983 reprogramings to support the HTLD?

ANSWER: The Army has two RDTE programs associated with the 9th Infantry Division at Ft. Lewis. The first is the testing program administered by the Army Development and Employment Activity (ADEA) for which $42.5 million is budgeted in FY 1984. The second program is the fielding program directly focused on developing systems which will be used to field the prototype HTLD. The Army has $42.1 million in the FY 1984 budget for those systems. Other related programs are being accelerated to meet the HTLD fielding date of FY 1986 and contribute an additional $27.6 million RDTE.

The Army has worked hard to present our full FY 1983/1984 requirements to Congress through budget estimates this year. While additional FY 1983 RDTE requirements are reflected in the FY 1983 column, we were unable, for administrative reasons, to reflect the procurement program adjustments to fund HTLD. We have prepared the Prior Approval Reprograming Action to support all FY 1983 requirements ($11.1 million RDTE, $22.9 million WTCV, and $15.6 million missile procurement). You can expect it to be submitted to the Congress shortly. These funds are essential to the 1986 fielding of the HTLD prototype.

HTLD programs identified for both RDTE and procurement in the FY 1984 budget fully fund the development/purchase of sufficient quantities of equipment for the 9th Infantry Division (HTLD).

HIGH TECHNOLOGY LIGHT DIVISION

QUESTION: What are the top priorities for the HTLD?

ANSWER: The top priorities for the HTLD are:

Strategic Deployablity
Tactical Mobility
Distributive Command, Control, Communications and Intelligence
Firepower

QUESTION: Secretary Marsh, last year you informed this Committee that readiness is a critical area of need and should be emphasized. Why has the percentage of the Army's budget for readiness--operation and maintenance--declined each year since 1980?

ANSWER: Resources which contribute to Army readiness include more than just operation and maintenance funds. A major contributor to readiness is the availability of equipment. Procurement dollars are used to purchase stocks of existing end items as well as modernized systems. While we are striving to provide a balanced program in terms of capability, our number one priority continues to be readiness, with special emphasis on equipping the total force. This includes both filling existing shortages and modernizing the force with new, more capable equipment. As a result, although the percentage of O&M resources has dropped, the Army's budget reflects the result of a well-planned balanced total program.

Special Operations Forces

QUESTION: Mr. Secretary, in the DOD Annual Report it was stated that our Special Operations Forces are being trained for missions in specific regions of the world. Are we creating a new Rapid Deployment Force from the Special Operations Forces?

ANSWER: No. Our Special Operations Forces currently consist of Rangers, Special Forces, Psychological Operations, and Civil Affairs units. Except for our Ranger battalions, our Special Operations Forces require thorough familiarity with the terrain, the social and religious mores, the ethnic composition, the political systems and infrastructure and the climatic conditions of their potential areas of operation. Additionally, they must be proficient in the language of the area. This requirement for intensive and extensive orientation on their areas of operation accounts for our training them for missions in specific regions of the world. Our Special Operations Forces are required to be prepared for rapid deployment for peacetime or wartime missions in their assigned regions, but they are to be deployed either for missions in which the use of conventional forces is inappropriate or infeasible or for missions to complement conventional forces. Consequently, Special Operations Forces and Rapid Deployment Forces are not synonomous and our expansion of the Special Operations Forces should not be interpreted as the creation of new Rapid Deployment Forces. I also believe it is important to point out that 50% of our Psychological Operations, and 97% of our Civil Affairs assets are in the Reserve Components.

QUESTION: Is the doubling of Special Operations Forces units required because we have created the Central Command from the former Rapid Deployment Force?

ANSWER: First, we are not doubling our Special Operations Forces units. Currently we plan to add an Active Component Special Forces Group with two battalions to bring our number of Special Forces battalions to eleven from the current nine, we are adding an aviation unit, and we are adding one small team each to Civil

Affairs and Psychological Operations. Additionally, we will shortly undertake a comprehensive review of our Special Operations Forces in the Reserve Components to determine what reorganizations, consolidations, and additions may be appropriate. However, I seriously doubt that this review will result in any significant force structure additions. The envisioned increase to our Special Operations Forces are the result of detailed examinations of the disparity between our worldwide requirements and capabilities. The increases are not directly related to the establishment of Central Command.

QUESTION: You are seeking funds to more than double the production rate of the AH-64 from 48 to 112. What would be the impact of slowing that ramp up and essentially stretching the program out a year or two?

ANSWER: The current production program has been designed to take advantage of economic production rates. At the end of the on-going Fiscal Year 83 buy of 48 aircraft, that ramp has built to 7 aircraft per month. The Fiscal Year 84 procurement rate does not double, but will continue that buildup gradually to an efficient 12 per month rate. This production ramp provides AH-64s in the most timely and economic manner. Any stretchout destroys these advantages. The most immediate impact of a stretch out would be a retroactive cost increase into the burden rates already negotiated during the Fiscal Year 83 procurement. This impact can easily increase that cost by up to $10 million. Those funds have not been budgeted or appropriated. In addition, procurement unit cost for the 515 aircraft program can be expected to increase by approximately $1 million per aircraft. That increase is due to buying aircraft later, loss of learning benefits, and production line/procurement inefficiencies. It is critical that the APACHE be fielded in unit size organizations as quickly as possible in order to maximize its contribution to overall force modernization. Any stretchout delays fielding and denies a weapon system essential to counter the numerically superior Soviet armor threat.

MASTER RESTATIONING PLAN

QUESTION: Mr. Secretary, you indicated in your report that the Master Restationing Plan for Germany is still an active Army interest. Is this still a high priority program? What is in the FY 84 budget for it? What about 1985?

ANSWER: The Master Restationing Plan (MRP) remains a high priority for the Army and the Administration. No money in support of the Master Restationing Plan was requested in the FY 84 budget.

This summer, we will evaluate the status of the negotiations in light of the restrictions placed on MRP funds authorized in the FY 83 budget to determine what, if any, MRP projects should be included in the FY 85 request.

STOCK FUND

QUESTION: Why has the fiscal year 1984 budget request for the Army Stock Fund increased by 85 percent? How much of this increase is attributable to the Army's modernization program?

ANSWER: The majority of the fiscal year 1984 budget request for the Army Stock Fund increase is for the Army's modernization program. The modernization program increases $131 million with war reserve increasing $34 million and inventory build for commissaries increasing $23 million. This accounts for the entire $188 million or the 85 percent increase.

Overall Army RDT&E Program

QUESTION: The Army's FY 1984 budget of $4.8 billion is 23 percent larger than last year's appropriation under the continuing resolution. Does the Army's outyear procurement plan provide sufficient budget authority to support bringing all of our new programs to production?

ANSWER: For all systems oriented Advanced Development (6.3B) and Engineering Development (6.4) projects the Army's Long Range Research, Development and Acquisition Plan provides the linkage between RDTE and system procurement. The plan, which is system-based, uses system cost estimates for planned procurement in the outyears; and is constrained to a projected TOA. At currently planned TOA levels, the Army's outyear procurement plan does provide budget authority to support bringing these systems into production.

Research and Development Priorities

Question. What are the Army's top R&D priorities for FY 84?

Answer. RDT&E efforts will emphasize the operational concepts of AirLand Battle doctrine and the smooth transition to AirLand Battle 2000, integrating the development of high technology systems into these concepts. In addition to supporting continued development of major weapons systems, the Army's R&D priorities in the technology base and advanced development focus on the following areas:

High Technology Light Division/High Technology Test Bed (HTLD/HTTB) weapons and support systems/equipment.

Target acquisition/deep attack capabilities and improvements, particularly in target detection, which are essential to improve the capability to find and defeat second echelon forces.

Command and control, electronic warfare, and early warning systems which permit forces to be employed effectively and survive under high intensity conditions.

Very Intelligent Surveillance and Target Acquisition (VISTA) systems which incorporate netted and distributed fusion processes based on Very High Speed Integrated Circuit (VHSIC)/Very Large Scale Integration (VLSI) technology.

Distributed command, control, communications and intelligence assets which will allow implementation of a cellular, distributed command post.

Self-contained second and succeeding generation "smart" munitions to give indirect fire projectiles and missiles a "fire and forget" and battle damage assessment capability.

Soldier-Machine Interfaces. This concept addresses the advanced technology (including artificial intelligence/robotics and avionics/vetronics) that molds materiel systems to the soldiers who operate, maintain, and support them to form a single functional entity.

Biotechnology which emphasizes the application of novel technologies (such as genetic engineering) to the prevention and treatment of casualties. It includes development of vaccines, antidotes, and other treatment compounds for use in hazardous Nuclear, Biological, and Chemical environments.

Lasers and directed energy weapons.
Ballistic Missile Defense.
A comprehensive logistic R&D program to improve logistic supportability, readiness of Army materiel, and the performance and/or efficiency of logistics functions and systems.

Army RDT&E Real Growth

QUESTION: The Army RDT&E budget request of $4.8 billion is nearly $900 million above the FY 1983 appropriation. Into which budget activity (tactical, strategic, etc.) is most of this program growth going?

ANSWER: The majority of program growth in the Army RDT&E appropriation between Fiscal Years 1983 and 1984 occurs in Budget Activity 4, Tactical Programs. This growth within Tactical Programs in Fiscal Year 1984 amounts to a $425 million increase over the Fiscal Year 1983 RDT&E appropriation, and represents a continued commitment by the Army to its force modernization effort.

QUESTION: An analysis of the Army RDT&E budget by program category shows that most of the program growth is in Advanced Development (6.3) programs (some $566 million). The advanced development category is where many new program starts typically occur. What initiatives have been included in the FY 84 Army research and development budget which have caused this major growth in the advanced development program budget?

ANSWER: The Advanced Development (6.3) program category has the greatest amount of program growth within the RDT&E budget. Seventy percent of the growth in 6.3 is in the following program elements:

- o Ballistic Missile Defense ($190 million increase)
- o Medical Defense Against Chemical Warfare ($45 million increase)
- o Tactical Electronic Countermeasures Systems ($34 million increase)
- o Army Development and Employment Activity ($31 million increase)
- o Advanced Rocket Control System ($31 million increase)
- o Antitactical Missile ($23 million increase)
- o Chemical/Biological Detection, Warning, and Sampling Materiel Concepts ($21 million increase)
- o Advance Software Technology ($19 million increase)

These increases in the Advanced Development area will allow for further exploitation and development of technology base efforts, which support our overall plan to improve Army capabilities in areas where previous funding and priorities have not allowed us to progress at the rate needed for our Defense requirements.

QUESTION: When estimating the life cycle cost for major weapon systems, does the Army include replenishment spares?

ANSWER: Yes. Army cost estimating discipline as recorded in DA Pamphlet 11-4 "Operating and Support Cost Guide for Army Materiel Systems" requires the inclusion of replenishment spares. It is cost element 3.021.

QUESTION: Please provide the budget data for the annual cost for replenishment spares in the FY83 and 84 budgets for the following systems: M60A1 Tank; M60 A3 Tank; M1 Tank; Bradley

Fighting Vehicle; M113 Armed Personnel Carrier; DIVAD Gun; VULCAN Gun; AH-64 Attack Helicopter, AH-1S Helicopter; UH-60 Helicopter; UH-1H Helicopter; Multiple Launch Rocket System?

ANSWER: Current Budget estimates for replenishment spares are based upon demand for component items from user units and aggregated by component rather than weapon system. The Army has begun to develop the means to identify replenishment spares cost associated with a particular weapon system in CY85 for the FY87 President's Budget. This timeframe was recognized as valid by OSD and subsequently directed in the FY84 Defense Guidance to the Army for implementation.

QUESTION: If replenishment spares are not included in the life cycle cost estimates, how does the Army perform cost benefit analyses for major weapon systems?

ANSWER: As covered above, the Army includes replenishment spares in its life cycle cost estimates.

Product Improvement Programs

QUESTION: On page 31 of your written statement, it is noted that the Army has currently "identified eight major weapons systems for improvement as alternatives to developing new systems." What are these eight programs, and what is the Army's estimate of how P^3I efforts for these programs will save us dollars over new development programs? How long do you expect these product improved systems should last?

ANSWER: During the development of the FY 84 Budget, the Army initially considered eight systems for preplanned product improvements (P^3I). After further review of these systems the list has been reduced to five systems:

a. ABRAMS tank. P^3I is for a Hybrid NBC system, Armor MOD, and Final Drive Gear Ratio Change.

b. APACHE Helicopter. P^3I is for the following candidate improvements:
(1) Extended mission range/self deployment
(2) Automatic target hand-off
(3) Provision for air-to-air operations
(4) Wirecutter
(5) Radio frequency interferometer

c. BLACK HAWK Helicopter. P^3I is for the following improvements:
(1) Desert Environment APU particle separator
(2) Two-Hook Suspension 12,000 pounds
(3) Upgraded Engine
(4) Improved Transmission (Integration of Navy developed transmission)

d. Advanced Field Artillery Tactical Data Systems. P^3I is for the following improvements:
(1) Communication Control System
(2) Fire Support System
(3) Fire Support Terminal
(4) FATDS Peripherals

e. PATRIOT.

The use of P^3I in lieu of initiating new development programs was strongly endorsed by then-Deputy Secretary of Defense Frank Carlucci in his Acquisition Improvement Initiatives of 1981. The philosophy of P^3I is to include growth potential during the basic design of new systems to accomodate future evolutionary improvements and by making the structure of the new system sufficiently flexible to accomodate modular changes. This is particularly beneficial when there is a long term military requirement to be satisfied and/or the threat or need is projected to change as a function of time requiring a change in the response. Mr. Carlucci recognized that a major factor that had contributed to the increased time and costs associated with fielding new weapons systems had been the preference, often made of necessity, for high technology systems. While the advantages won through high technology programs should not be abandoned, strategies for our programs now adopt a more evolutionary approach by incorporating P^3I. This allows us to field more systems sooner at lower cost. It provides further cost savings by reducing administrative costs associated with initiating new development programs. The useful military life of product improved systems is not necessarily calculated in months or years. The evolutionary application of new technology to overcome new threats or changes in need prevents a system from becoming obsolete which would result in its disposal when introducing a new system for replacement. Thus its useful military life is extended and possibly further extended by continued application of P^3I.

VALUE ENGINEERING PROGRAM

QUESTION: It is stated that the Army's Value Engineering Program will result in a savings of $435 million between now and FY 1988. What percentage of programs or projects under Army management use the value engineering concept? What are some of the major Army programs using VE?

ANSWER: Army Economies, Efficiencies, and Management Improvement (EEMI) FY84 President's Budget Submit identifies $451.3 million in VE savings for FY 82-88. Value Engineering savings have been reported in major Army programs (75%). Some of these programs are: Advanced Attack Helicopter (AAH), Circuit Switch (AN/TTC-39), Blackhawk Helicopter, Bradley Fighting Vehicle Systems (BFVS), CH-47 Helicopter, Hellfire Missile System, M1 Abrams Tank System, Multiple Launch Rocket System (MLRS), Patriot Missile System, Pershing II Missile System, and Stinger Missile System.

QUESTION: Is it fair to state that the Army is ahead of the other services in incorporating value engineering into its acquisition programs? Why is the Army ahead of the other services in this regard?

ANSWER: The Army is vigorously pursuing its value engineering program. The Army has developed a Master Plan which outlines goals and objectives that result in increasing Economy, Efficiency, and Management Improvements. This plan assigns goals to major Army commands and identifies actions that must be accomplished to obtain the desired results from the VE program. The Army has an established contractor VE award program for contractors providing a net savings to the Army of $0.5 million or more. Awards are also provided to contractors having a net savings of $100,000 or more. The Army conducts Value Engineering Seminars with contractor participation on a regular basis. Two seminars have already been held in Dover, New Jersey and Chicago, Illinois. A third seminar is planned for June 1983 on the west coast. These seminars have been very effective in motivating both small and large contractors to participate in the value engineering program. The Army has established procedures for reporting VE savings through the formal discipline of Planning, Programing and Budgeting System (PPBS). The Army actively participates in professional societies and industrial associations to promote VE. One of the major areas that contribute to the overall success of the Army's VE program is top management support and involvement in the program.

JVX Program

QUESTION: Last year the Army was the lead Service for the JVX Program. This year that lead has been transferred to the Navy. If the Army withdrew from the JVX Program, what kind of program would it develop for its SEMA-X needs?

ANSWER: It is doubtful that the Army alone could afford a new SEMA aircraft development program to meet its SEMA-X needs. Extending the life of selected SEMA aircraft and/or procuring a replacement existing aircraft would probably be the only affordable alternatives.

Without a JVX, the Army would have to readdress how best to satisfy the SEMA-X requirements.

REMOTELY PILOTED VEHICLES (RPVs)

QUESTION: Does the $60 million in the FY 1984 budget for the remotely piloted vehicle program indicate that the Army is now committed to field RPVs with Army units, such as the High Technology Light Division?

ANSWER: Yes. The Army is committed to fielding RPVs with Army units. The RPV program now has a high Army priority and is fully funded in Army plans for the future. One RPV section operated by soldiers will participate in field tests with the High Technology Light Division in late 1983. Army budget request for FY 1984 is $138.1 million for the RPV program not $60 million.

QUESTION: How much of the FY 1984 budget request is for the FLIR (forward looking infra-red) night navigation effort? Does the RPV FLIR IOC coincide with the RPV IOC?

ANSWER: $34.7 million of the FY 1984 RPV budget request is for the FLIR night navigation effort. RPV FLIR IOC does not coincide with RPV IOC. FLIR IOC is 2d Quarter FY 1989. RPV IOC with a day TV capability is 4th Quarter FY 1987.

Anti-Tactical Missile

QUESTION: Has the Army fully determined its inventory objectives for the anti-tactical missile? Has the total estimated program cost been identified? When does the Army project that ATM will enter engineering development?

ANSWER: The Army has not determined its inventory objectives for the anti-tactical missile. The total estimated program cost has not been identified. Engineering development for the near term portion of the ATM program and upgrade of existing air defense systems will start in FY84, however, engineering development for the long term portion of the program is planned in FY89.

TACTICAL BALLISTIC MISSILE THREAT

QUESTION: Please comment on the seriousness of the tactical ballistic missile threat to our Patriot and Pershing missiles in Europe.

ANSWER: [Deleted].

Improved Conventional Munition (ICM) SINGLE SHOT KILL PROBABILITY (PSSK)	
Pershing	Patriot

155MM NUCLEAR PROJECTILE

QUESTION: The Army is requesting funds in FY 1984 for the development of a new 155mm nuclear projectile. What is the total acquisition cost for this program?

ANSWER: The acquisition cost (research, development, production) for the 155mm nuclear projectile in escalated dollars is $446.6M (DOD) and [deleted].

New Starts

QUESTION: Three major Army R&D programs which receive sizeable budget increases are: 155mm self-propelled Howitzer improvements; Joint Tactical Missile System (JTACMS); and Joint Surveillance Target/Attack Radar (JSTAR). How significant are these programs in the Army's list of RDT&E priorities?

ANSWER: The howitzer improvement program is essential to ensure that we maintain a responsive, survivable, and lethal self-propelled howitzer through the 1990s and beyond. JTACMS and JSTAR are extremely significant for the purposes of Seeing Deep and Striking Deep under AirLand Battle doctrine.

BMD PROGRAM

QUESTION: The Army has conducted a major overhaul of the Ballistic Missile Defense Program, one which will result in a doubling of the BMD R&D budget in FY 1985. Can you discuss the extent to which you have restructured the BMD program, and its interface with the MX/CSB program.

ANSWER: The restructured BMD program approach has been in progress since the fall of 1981. Prior to this time, the approach was focused on a combination of:

- Mobile, deceptive defense of large numbers of MX in Multiple Protective Shelter configuration.
- Active radar, nuclear kill interceptor (formerly LoAD, now SENTRY).
- IOC deployment [deleted].

Subsequent to Fall 1981, the principal effort included defense of MX in either Minuteman silos [deleted] or in the closely spaced basing mode [deleted].

The present thrust of the BMD program is a broad-based and vigorous R&D program which is characterized by:

- Evolutionary system improvements applicable to a full spectrum of defense concepts.
- Less emphasis on deployment aspects of a specific BMD system.
- Establishment and maintenance of a capability for early BMD deployment [deleted].

- An increasing development effort, including flight demonstration, over the next few years to introduce into the system such improvements as nonnuclear kill of attacking RVs (endoatmospheric and exoatmospheric) and airborne optical sensors.

To insure an integrated strategic program, the Army BMD organization has multiple interfaces with the Air Force Peacekeeper program. The most extensive liaison is through the US Air Force Ballistic Missile Office (BMO). This interface is formalized by a Memorandum of Agreement between the BMD Program Manager and the Commander, US Air Force BMO. Procedures are established which provide the means to identify necessary ICBM/BMD interfaces and assure that Peacekeeper and its basing mode are designed so that defense, if deployed, can be accommodated.

The BMD defense option for Peacekeeper, when combined with other program activities, can field a system [deleted].

However, if the decision taken by the President concerning the basing mode of the MX is other than CSB, the BMD budget will have to be redirected.

CHEMICAL WARFARE PROGRAMS

QUESTION: The Army is asking for sizeable increases in three chemical R&D programs: chemical biological detection and warning material concepts ($28.9 million); medical defense against chemical warfare ($47.8 million); and lethal chemical munitions ($15.5 million).

General Meyer, can you provide us with some guidance as to where our chemical warfare program is, and where these new initiatives are taking us?

ANSWER: The FY84 program continues to improve the Army's CW/NBC Defense posture. The program supports the initiatives outlined in the Army Chemical Action Plan. It consists of two essential and complementary elements, an effective protective posture and a credible chemical retaliatory capability. During the FY84-88 period, the Army will acquire current state of technology protective clothing, decontamination materiel and equipment, detectors and alarms, medical equipment and antidotes, and collective protection capability in combat vehicles. These procurements, coupled with improvements in force structure, doctrine, and training should provide a capability for active Army forces to sustain combat operations in a chemical warfare environment by 1987, although with a resultant degradation in performance if forced to fight in a protective posture. The objective of the retaliatory capability, through stockpile modernization, is to maintain a safe, reliable, militarily effective chemical munitions stockpile that denies a significant military advantage to any initiator of chemical warfare. The three initiatives referred to in the question are key elements of the overall CW/NBC program. The status and objective of each are addressed below.

Chemical biological detection and warning material concepts. The Army's current family of chemical-biological (CB) agent detection, warning and reconnaissance systems lack necessary response time, sensitivity, agent specificity, and stand-off detection capability to execute the Army's defensive operational concept of contamination avoidance. The $28.9 million for CB Detection and Warning Materiel Concepts supports advanced development of an automatic chemical agent detector/alarm, a remote sensing chemical agent alarm, an NBC reconnaissance system, and a NBC remote detector. These items are critical for survival on the highly lethal modern integrated battlefield. Specifically, they will be used for alerting field soldiers to a CB agent attack, for NBC reconnaissance and survey of the battlefield, for monitoring to identify uncontaminated (clean) areas, and to determine the degree of exposure to CB agents.

These systems are part of an integrated family of advanced detection and warning devices necessary to protect the soldier in the field in the event of a CB attack. The funding of this R&D program is expected to peak in FY 1985 as the technologies being developed mature and enter development. Together, these systems will provide, for the first time, a complete integrated family of CB detection and warning devices.

Medical defense against chemical warfare. The Army has initiated a comprehensive medical chemical defense program to provide a technology base and product development to meet the following identified CW defense needs: soldier CW agent antidotes for nerve, cyanide and blister agents; soldier and patient decontamination; and medical management of CW casualties. Since the Army has been designated as the Department of Defense (DoD) executive agent for this work, the program supports DoD requirements in these areas.

Funds ($47.8 million) for the medical chemical defense 6.3B program are required to develop medical materiel and to capture the pharmaceutical industrial base necessary to insure that compounds currently under development in 6.2 and 6.3A programs transition in a timely manner consistent with the Army Chemical Action Plan and Tri-Service requirements.

A major developmental accomplishment against CW agents is that the Mark I autoinjector which unites atropine and 2-PAM Cl autoinjectors into a single unit, is being procured and delivered to the field. Other research accomplishments include: identification of a promising pretreatment compound for use against nerve agents; identification of a safe method of formulating a potential second generation oxime antidote for nerve agents; and identification of several potential polymeric resins which may provide the first non-irritating material for skin and wound decontamination.

The antidote and pretreatment program seeks to keep abreast of new Soviet threat technologies and develop antidotes that presently do not exist. It is anticipated that the following antidotes and pretreatments will be available: a nerve agent pretreatment compound (1986), lewisite pretreatment compound (1990's), and second generation nerve agent antidote (1990's).

Management of CW casualties on the battlefield will be extremely difficult due to the toxic environment, the severity and immediacy of the symptoms, and the high percentage of casualties expected. To manage CW casualties, the following products are anticipated: patient wrap (1984), decontamination litter (1984), vital signs monitor (1986), and chemically hardened medical sets, kits, and outfits (1985).

Lethal Chemical Munitions. The Soviets have developed and maintain a formidable offensive chemical warfare capability which presents a threat to survival of US and NATO forces. In contrast, the US has not produced any new chemical weapons since 1969. Current US chemical warfare retaliatory munitions and delivery systems are deficient--both in quantity and effectiveness. While planned production of binary munitions will improve the United States retaliatory posture, it is still vital that Soviet advanced technology be monitored and that available new concepts, agents, and munitions be explored and developed. The $15.5 million for Lethal Chemical Munitions Concepts supports continued advanced development of a binary chemical warhead for the Multiple Launch Rocket System (MLRS). This is the Army's only retaliatory R&D effort in FY 1984. The MLRS with binary chemical warhead will provide the Army a standoff chemical delivery capability with a militarily effective range, area coverge, and rate of fire as well as a reduced collateral damage potential.

QUESTION: Why should we proceed with development of chemical warheads and fills for MLRS, when Congress refuses to produce the 155mm round?

ANSWER: Because of the formidable Soviet chemical warfare (CW) threat, the confirmed use of chemical and toxin weapons in Southeast Asia and Afghanistan, and the lack of progress in CW arms control negotiations, the development of a credible chemical retaliatory capability for both deterrence of CW and as arms control leverage remains a vital necessity to our national security.

To be credible, our retaliatory stockpile must be capable of forcing an enemy to adopt the same restrictive protective measures--equivalent to 30-50 percent reduction in unit military effectiveness--as he would impose on us by chemical use. This requires that we be able to hit him up close, mid-range and deep. It also requires a combination of effective chemical weapons systems and agents. Our present chemical stockpile does not have these capabilities. It is old and contains no effective means of engaging enemy targets with semi-persistent or persistent agents beyond tube artillery range, about 12 to 20 kilometers forward of the friendly line of troops.

The Multiple Launch Rocket System (MLRS), currently under development, will play a key role on the future battlefield in extending the range at which ground commanders can influence the action. A binary chemical warhead delivering a semi-persistent agent for this system will fill a critical void in our retaliatory capability. It will reinforce the shorter range tube artillery providing rapid, large area chemical coverage and give the tactical commander the means to place heavy concentrations of chemical agent on intermediate range enemy forces--second echelon regiments and supporting elements out to about [deleted] forward of friendly troops. The semi-persistent nerve agent fill will disrupt, delay and degrade these forces severely limiting their influence on the close-in battle as required by Soviet and Warsaw Pact doctrine.

Retaliatory requirements also include the 155mm binary nonpersistent agent artillery projectile for support of the close-in battle and the BIGEYE BLU-80/B persistent agent bomb for the deep targets such as rear echelons, airfields and major logistics complexes.

The President's FY84 Budget Request contains funds for binary facilities, production, research, and development. As far as the MLRS is concerned, we are asking, right now, only to be allowed to continue to develop the binary chemical warhead. This will permit us to stay current with state-of-the-art technology so that it will be possible to produce a munition that is compatible with this new delivery system should the need persist. Any production decision would be based on the status of arms control efforts and refinement of military needs at the time.

SEMA-X/JVX

QUESTION: Does the Army really believe that the JVX tilt-rotor aircraft would be the right platform to meet its special electronics mission (SEMA-X) requirements?

ANSWER: The JVX tilt-rotor program has been selected by the Army as the technology most suited to meet the performance characteristics stated in the SEMA portion of the JVX Joint Service Operational Requirements document.

QUESTION: Would a 30,000 pound JVX meet the Army's SEMA-X requirement?

ANSWER: Initial and current design estimates for the JVX aircraft support the Army's SEMA sensor package of 4646 pounds as stated within the Joint Service Operational Requirements document. The overall aircraft weight of the JVX will be addressed during the upcoming preliminary design phase.

Product Improvements Savings

QUESTION: Perhaps you can also explain why the Army is devoting such a large portion of its budget to investment in new weapons systems instead of product improvement.

ANSWER: The Army seeks to solve deficiencies in response to the threat by the least costly means, e.g., changes to doctrine and concepts, product improvement, then lastly, new systems. What appears in the budget is an aggregate of individual decisions made during Materiel Decision Reviews (MDR) on each system as to the most cost effective approach to solving the threat deficiency. Emphasis is given to product improvements or Preplanned Product Improvements (P^3I) where this is the most cost effective means. By the same token, the development of a new system may be determined to be the most cost effective means over the long term when either there is no system of the type in the inventory, or the product improvement of an existing system will not significantly increase its performance envelope to meet the threat.

AUTOMATED METER CALIBRATION SYSTEMS

QUESTION: Mr. Secretary, the Committee restated its interest in Army calibration equipment purchases last year. Would you review for us where you stand in your planned procurement of automated meter calibration systems?

ANSWER: Since November 1981 we have had a major effort underway to improve the Army's overall program for test, measurement and diagnostic equipment (TMDE). The Under Secretary of the Army has taken personal interest in this endeaver.

Two comprehensive, formal reports on this effort have been provided to the Congress. On 15 March 1982, a report, entitled Department of the Army Test, Measurement and Diagnostic Equipment Action Team (DATAT), was forwarded to the Committees. Also in August 1982, a detailed, time-phased implementation plan entitled, TMDE Implementation Plan, was provided. These reports carefully documented a complete and thorough review and improvement of the Army's TMDE program. The majority of the actions, to include the total workload assessment, will be completed by July 1984.

We have also been conducting, on an expedited basis, the competitive procurement of automated meter calibration equipment for Army fixed site operations in the United States. At the urging of some members of Congress, the scope of this effort was focused on early procurement of hardware. Approximately 80% of the Army's meter inventory can be calibrated in a cost effective manner using the equipment tested in this competitive procurement.

This procurement is consistent with our overall TMDE plan, will effect substantial savings, and is an important example of our commitment to competition as the preferred procurement method.

We are coordinating appropriate documentation with Congressional staff before consumating the procurement.

XM 252 MORTAR

QUESTION: Last year the committee denied funding for your new XM 252 mortar. You have again requested production funds in 1984. What has transpired in the last year to qualify this weapon for type qualification and production?

ANSWER: During testing conducted in 1982, the XM252 mortar system met all major technical and operational requirements except one. A powder increment container problem caused excess residue in the tube and occasional muzzle flash. This powder increment container problem has since been solved and on-going testing to verify the solution is scheduled for completion in May 1983.

The XM252 mortar program is a codevelopment effort with the United Kingdom. They justifiably expect us to procure the system when we confirm that it meets our requirements. We project that this procurement will be possible in the first quarter of FY 1984.

TRAINING AMMUNITION

QUESTION: One of the other things that your 1984 request reportedly does not do is "totally meet training ammunition requirements." What specifically is not being met and what is the size of the problem in dollars?

ANSWER: Examples of specific shortfalls are:

Cal 50 4+1 (2,500,000 rounds)

Impact: Will be short 30% of minimum training ammunition to qualify tank crews. Units affected will be armored battalions and brigades.

20MM TP-T (2,100,000 rounds)

Impact: Will be short approximately 50% of annual training requirement with only 1 of 2 gunners on each system being qualified. Units affected will be air defense (Vulcan) battalions.

30MM TP-T (263,000 rounds)

Impact: Fails to qualify attack helicopter pilots for aerial gunnery due to 40% ammunition shortfall below minimum levels. Units affected will be aviation battalions.

40MM TP-T (DIVAD) (201,000 rounds)

Impact: Will be short 2/3 of minimum training ammunition to qualify DIVAD gunner for division level air defense. Units affected will be air defense battalions.

Cal 45 Ball (22,800,000 rounds)

Training with Cal .45 in FY85 and beyond will be dependent upon reprograming from 9mm ammunition funding until the 9mm Personal Defense Weapon is fielded. Will affect individuals throughout the Army. Principal impact will be in security, armor, and infantry units.

The FY84 budget is short a minimum of $140 million. This dollar shortfall is reduced from $395M identified earlier in the year. Requirements have continued to be examined and revised downward.

TRAINING AMMUNITION

QUESTION: Isn't the problem more one of allocating most of the ammunition procurement program to filling war reserve requirements rather than training requirements?

ANSWER: Yes. Allocation of dollars between war reserve and training ammunition has been a major reason why training ammunition requirements were not totally met.

For several years, we have provided approximately 70% of the ammunition procurement dollars to buy the supply of war reserve ammunition prescribed by Defense Guidance. We assessed the risk of not fully funding training ammunition and decided the risk was acceptable and manageable.

With the introduction of Army-wide standards for training, we will be better able to evaluate annual training ammunition requirements and the impacts of funding shortfalls against these better articulated requirements. The risk/impact of the allocation of procurement dollars between war reserve and training will be re-examined with each POM/budget and adjusted as necessary.

Modernization Systems Support

QUESTION: Another item that your request does not do is "provide sufficient common equipment to support all system fielding needs". Doesn't that mean that your modernization program will have to be slowed down to prevent fielding of incomplete systems?

ANSWER: No. Support of new systems fieldings has priority over independent equipment needs of units. The FY 84 budget, together with prior year appropriations provides for sufficient quantities of common equipment to support new systems fieldings. However, there will be some delay in filling existing shortages unrelated to modernization.

MODERNIZATION SYSTEMS SUPPORT

QUESTION: Can you specify or provide for the record what additional equipment by budget line is needed to insure timely and full fielding of funded programs?

ANSWER: Current Army policy for distribution of equipment is to fill all requirements for system interchange items and associated support items of equipment (ASIOE) ahead of all other requirements for equipment. Selective distribution of existing assets and deliveries from funded support equipment programs will allow the Army to satisfy all support equipment interchange requirements for fielding all systems through FY 84.

Accurate identification of ASIOE requirements far enough in advance to have the support items available by the system fielding dates has been a problem in developing procurement programs for common support items. In developing the Army Program Objective Memorandum (POM) for FY 85-89, improved procedures are being implemented to identify requirements for support items that are critical to the fielding of new systems. During development of POM FY 85-89, known shortages of equipment in FY 85 and beyond for interchange and ASIOE requirements will be resolved in conjunction with need for these same items to fill unit shortages.

AMMUNITION PROGRAMS

QUESTION: Where do you stand on the testing and evaluation mandated by Congress on the light anti-armor weapon program? What criteria are being used by the Army in evaluating the alternatives? How many weapons do you anticipate will be evaluated and what are they?

ANSWER: The testing is scheduled to begin 1 Apr 83 and be completed by 31 Jul 83. Both the Army and the Marine Corps decided to develop and use a very orderly procurement process which would provide valid costs and schedule data in addition to technical data on which to base an evaluation and selection of a possible alternative to Viper. This formal procurement process will result in the information requested by Congress after completion of testing on approximately 31 Jul 83. A Joint Army/Marine Coordinated Test Program (CTP) has been developed and has been approved through the Department of Defense level. For test purposes, the performance parameters that were relaxed were weight to 20 lbs. or less; carry length to 40 inches or less; penetration to 14 inches or greater; precision accuracy to 2.0 mils or less; and time of flight to 250 meters of 1.25 seconds or less. The rationale used was to insure that the parameters would result in systems being available for testing and the absolute maximum exceptions that the Army and/or Marine Corps could allow for a weapon. Five competing systems that meet the RFP requirements are on contract. Contractors are scheduled to deliver systems for tests no later than 1 April 83. The five competing systems are LAW 80 (United Kingdom), AT-4 (Sweden), Improved LAW-750 (Norway), ARMBRUST (Germany) and a variation of VIPER (US). In addition, the basic M72A3 LAW and cost reduction VIPER systems will also be tested in the program.

The Army will evaluate the systems in 8 major areas: Technical, Cost, Training Supportability, Portability, Logistics Supportability, Producibility, Management and Safety. The specific factors are: Technical -Penetration of armor, effective range, precision accuracy, weight, length, time of flight to 250 meters, impulse noise, reliability, system function and environment, and sight and round capable of 500 meters. Cost - Battlefield scenario cost performance effectiveness, unit flyaway cost, non-recurring US investment cost and total cost of options. Training Supportability -Training devices programs of instruction and field manuals/training manuals. Portability - Portability and ruggedness over mobility/portability course and operational compatability with fighting load and vehicles. Logistics Supportability - Maintenance concept; storage; shipping and handling concept; and technical manuals. Producibility -Production capability on site and in the US, critical materials/components availability, and completeness/propriety limits of technical data. Management -Contractors experience and past performance, adequacy of contractor/subcontractor facilities for the program, adequacy of management capability and management plan. Safety - Go/no go. A system will not be considered for a follow-on contract award if a failure occurs that verifies that there would be a safety hazard that would imperil the safety of a gunner. The actual weight assigned to each factor is procurement sensitive and cannot be furnished at this time. The factors listed above are in priority order of most important listed first.

The Marine Corps has slightly different criteria and will evaluate the systems tested in 4 major areas: Technical, cost, logistics supportability, and management. The specific factors are: Technical - System performance, operations and training, and producibility. Cost -Battlefield scenario cost performance effectiveness, unit flyaway cost, non-recurring US investment cost, total cost of option. Logistics Supportability - Maintenance concept, storage, shipping and handling concept, and technical manuals. Management - Contractors' experience and past performance, adequacy of contractor and subcontractor facilities for the program, adequacy of management capability including system engineering, human engineering, safety, maintainability, etc., and management plan to include adequacy of overall program, plan and pertinent milestones. Again, the weight assigned to each factor is procurement sensitive.

In addition to the test and evaluation of light anti-armor weapons we previously informed you of our intent to conduct an evaluation of the military potential of unguided medium anti-armor weapons (UMAW). They will be tested in the same manner and concurrently with the LAW candidates. However, because the Army has no requirement for a UMAW, there will be no competitive aspect to the evaluation. Contracts for procurement of UMAW test rounds were recently awarded to each of the following: APILAS, STRIM, and Panzerfaust III. A report of these test results will also be provided.

AMMUNITION PROGRAMS

QUESTION. Secretary Marsh, you noted in your formal statement that European ammunition stockage objectives are being reviewed in light of a shortage of storage space and the fielding of a new close combat system in the near future. What is the situation, and how much has your ammunition procurement program been reduced?

ANSWER. USAREUR will be able to accommodate the projected prepositioned war reserve requirement of the new close combat system if NATO infrastructure funded facilities become available as anticipated, and if leasing agreements with Host Nation governments for additional storage space are approved. Our ammunition and missile procurement programs have not been reduced as a result of a potential shortfall in overseas storage space. Storage space is currently available in CONUS.

COPPERHEAD

QUESTION: Secretary Marsh, I noted that you have requested funds for the COPPERHEAD program in 1984 after funds were denied last year. There are no funds proposed for 1985. Where are you going in this program, and why should we revive production now?

ANSWER: The FY84 budget requested a reinstatement of the COPPERHEAD program to provide additional capability to the units in the Rapid Deployment Force. With this limited acquisition profile, the system exceeded the Nunn-McCurdy thresholds. On 4 April 1983, the Secretary of Defense provided certification of the continuing COPPERHEAD program, required by the Nunn-McCurdy Amendment, to both Houses of Congress. This certification supports a revised COPPERHEAD acquisition program that will total 30,462 rounds when completed in FY91. This certification is based on a program acquisition unit cost of $54,400 per round, reflecting a recently restructured program substantially different than either the appropriated program or that in the FY84 President's Budget. These are reasonable estimates of cost based in part on contractor-provided data; if further analysis and contract negotiations do not provide high confidence that the program can be continued within these estimates, the Secretary of Defense intends to reevaluate whether to proceed with the restructured program.

We are reviving production now to continue to build to provide additional capability to Army units and to preserve our initiative in developing and using the technology associated with smart munitions. The Army feels this capability is useful and desirable on the modern battlefield and should be pursued further.

MULTIYEAR CONTRACTING

QUESTION: Secretary Marsh, the committee is vitally concerned that multi-year contracting not be carried to the point that it drives up competition. I noted that you are proposing to multi-year on the M483 155mm Improved Conventional Munition. There are currently a number of qualified producers for this round and the program is clearly big enough to support very effective competition. Just what is your multi-year strategy for this program?

ANSWER: The Army is not proposing multi-year procurement for the complete M483A1 round. Only a few minor components will be procured on multi-year contracts.

PROJECTILE	FY84 BUDGET TOTAL	AMOUNT OF MULTI-YEAR
M483A1 DPICM	$233.0M	$6.7M

COMPONENTS ON MULTI-YEAR		PRODUCER(S)
Adapter	$1.8M	EMCO, Gaston, AL KISCO St. Louis, MO
Hardware Metallic	$3.6M	GAYSTON Corp. Dayton, OH
Hardware Non-Metallic	$1.3M	CONSIN Components Sheboygan, WI

Combat Vehicle Programs

QUESTION: General Meyer, last year you testified that the rate of M60A3 conversions could be increased to 720-770 per year. Your 1984 request is for 480 sets of conversion kits. How much could the conversion rates be increased this year?

ANSWER: The Army's fiscal year 1984 funding request is to procure 460 sets of conversion kits. Kits are applied to tanks approximately two years after they are procured because of manufacturing lead times. Approximately 460 sets of conversion kits are available for application in fiscal year 1984. Therefore, conversion rates cannot be increased this year.

QUESTION: What, if any, would be the impact on your readiness and modernization programs of increasing conversions to that level?

ANSWER: Conversions at the rate of 720-770 per year rather than 460 would modernize up to five additional battalion sets of tanks per year. However, an accelerated program requires additional procurement funds plus operations and maintenance funds two years later for kit application. Even though capacity exists to permit increased conversion rates, excessive turbulence would be caused in units and at the depots as larger quantities of tanks are withdrawn from inventory to support the line. This turbulence would adversely affect unit readiness. We believe the 460 rate adequately meets our conversion needs when balanced against costs, readiness and M1 new tank production levels.

QUESTION: The long range procurement program indicates that 1984 is the last year of production for the M113 and derivative vehicles. Has the Army decided to let the production line go cold except for Foreign Military Sales?

ANSWER: As matters stand now, these items are not funded in the out years. The recent history of declining Foreign Sales (FMS) of these vehicles and extremely limited quantities now forecast make it appear likely that FMS will not continue to sustain production.

QUESTION: Secretary Marsh, the M113 family of vehicles continues to serve the Army very well, but I understand there to be a shortage of them. It seems strange to me that you are concurrently procuring the M113 and its replacement, the Bradley Fighting Vehicle. By how much would the planned FY 1984 buy of 1052 M113's and M577's have to be increased to fill your acquisition objective for the M113, M577 and derivatives such as the Fire Support Team Vehicle and the Improved TOW vehicle?

ANSWER: An additional 4577 vehicles would be needed to fill the Army's Acquisition Objective for M113/M577 carriers. We would need 3089 M113's and 1488 M577's. The current planning guidance does not call for buying to the full Acquisition Objective, and the actual quantity of these vehicles that the Army would want to procure in the future would be considerably short of those figures even if funds were available. Procurement of a mix of these vehicles at a rate of approximately 600 per year total for the next two or three years would satisfy the most pressing shortages. This would keep our options open in terms of sustaining a production base. However, overall affordability considerations may prevent us from doing this. It should be pointed out that it is not correct to refer to the Bradley as the replacement vehicle for the M113. While both have the task of carrying mechanized infantry in a protected mode into battle, the capabilities of the Bradley Fighting Vehicle are significantly greater in protection, armament, speed, and purpose. On the other hand the M113 still is required in the intensive battlefield environment to carry armor-protected elements critical to battle success.

Bradley

QUESTION: The problem of rushing into rate production too fast is well recognized. Have you considered restraining the production ramp-up until solutions to rate production problems have been demonstrated?

ANSWER: We do not feel we have a production rate problem. Fifty-five Bradleys were produced in February 1983. This was five more than were scheduled. Although dips in the production rates could occur, we expect the rate to smooth out in the next few months.

Stinger

QUESTION: I understand that the Army plans to add a reprogramable microprocessor and a night sight and ranging devices to the Stinger-POST midway through the production program. The GAO has recommended to you that these improvements be accelerated to get larger numbers of the more capable missile. Has this been addressed and, if so, what is the Army position?

ANSWER: The Stinger-POST improvements have significant benefits that would argue for its acceleration. One improvement, the reprogrammable microprocessor, will improve the missiles capability against the newly defined postulated threat identified in April 1982. The Army is currently reviewing a means to accelerate this improvement. The other improvements will compete for funding in the product improvement process.

STRATEGIC MOBILITY

QUESTION: General Meyer, you mentioned in your prepared statement that you depend largely on your sister services for strategic mobility. I also understand that there is concern within the Army about the Air Force's proposed solutions to your intertheater and intratheater mobility requirements. What is your view as the Army Chief of Staff of the mobility support programmed for the Army and how would you improve or enhance that program?

ANSWER: Air Force airlift programs have generally supported Army mobility requirements. There is agreement on the need to further improve airlift capability, and cooperation between the Services has been good. Even now, joint Army-Air Force groups are working to determine the direction that future airlift programs should take. The issue is not so much the programs themselves but the fact that they satisfy only a portion of the requirement. For example, the C5B/KC10 acquisition substantially enhances mobility, but the fact remains that the timely deployment of forces to most theaters still cannot be accomplished. There is a need now to begin developing a replacement for the C141 and C130. The Army view is that this aircraft should be the multi-role C17. Finally, much of the wartime airlift capability is provided by US airlines. The vitality of this industry must be preserved despite economic conditions which make it attractive to retire some aircraft or to sell others to foreign competitors.

MLRS MULTI-YEAR PROCUREMENT

QUESTION: In approving the multi-year procurement of the Multiple Launch Rocket System the Committee limited the contract to five years. The Army wanted essentially a seven-year contract. What specifically did you sign as a multi-year contract? How were the sixth and seventh years treated?

ANSWER: The multiyear contract has not yet been signed; contract award is scheduled for July 1983. The contract will be a 5-year multiyear contract (FY 1983-1987); the remaining sixth and seventh years of procurement (FY 1988-1989) will be via contract options to the 5-year multiyear contract which will be fixed price, separate, and unilaterally severable by the Government.

QUESTION: You have requested advanced procurement funds for the sixth year of the program in your 1984 request. How do you justify that request when you are not on contract for the sixth year?

ANSWER: The requested funds are for procurement of materials in economic order quantities (EOQ). These materials would be procured under an option to the 5-year multiyear contract which will be fixed price, separate, and unilaterally severable by the Government. Exercise of this option will not obligate the Government to any remaining options. Procurement of these EOQ materials is within the Five Year Defense Plan (FYDP) and consistent with Department of Defense Procurement policies, even though the sixth year option will not yet be awarded.

SOVIET ATTACK HELICOPTER THREAT

QUESTION: A recent Washington Post article reviewed some of the Soviet military journal writings on lessons learned in Afghanistan. The implication was that the Soviets will continue to capitalize and enhance the warfighting capability of that helicopter with its [deleted] engagement range. This is (d) that of the DIVAD gun. How can Army field commanders effectively combat the HIND?

ANSWER: Army field commanders can effectively combat the

HIND helicopter with the DIVAD gun. The maximum engagement range for a HIND equipped with [deleted].

The (d) is the maximum range weapon known to be mounted on the HIND. The HIND carries, in addition to ATGMs, rockets, bombs and cannons. These munitions are effectively employed only at ranges much less than that for ATGMs. By forcing the HIND to attempt engagements from its maximum stand off range, the DIVAD has significantly reduced the firepower available to the HIND. Futhermore, the advantage in effective range that the HIND employing ATGMs has over the DIVAD is a potential that can be realized only occasionally. The battlefield is not a rigid line between forces. DIVAD guns, employed with the maneuver forces they are designed to defend, will be employed throughout the forward combat area. On this fluid battlefield it is reasonable to conclude that a DIVAD gun, other than one collocated with the HIND's target, may be capable of engaging the HIND. When one considers terrain and weather, the likelihood of the HIND realizing the full potential of its range advantage is reduced further. Analysis of the Fulda Gap area indicates that 40% of the time visibility is less than the effective range of the DIVAD. Rolling terrain and vegetation add to the difficulty of the HIND's crew detecting targets at longer ranges. Thus, under only the most ideal conditions will the HIND be able to engage at distances beyond the range of the DIVAD and this is only a factor in one on one engagements. Land Warfare isn't one on one engagements.

Stinger

QUESTION: Last year Congress provided $42.5 million to start production of the Stinger-POST ground-to-air missile. I understand that there are uncertainties about production yields of detectors and other critical seeker components for the Stinger-POST. What steps have you taken to solve these problems before the program enters full-scale production in 1985?

ANSWER: In November 1982, the Army initiated a program to fully develop an understanding of the process used to generate cadmium sulfide material and fabricate the ultraviolet detectors to more efficiently apply this technology. This program will be completed in April 1984.

OPERATIONAL SUPPORT COSTS

QUESTION: A recent study by the Congressional Budget Office estimated that the M1 tank will cost about 41 percent more to operate than the M60A1 tank and the new Fighting Vehicle Systems would cost 59 percent more to operate than the M113 personnel carrier. Is the Army budgeting fully for these added costs?

ANSWER: Both the Army and CBO agree that new systems are more expensive to operate and maintain and we have budgeted for it. The percentages quoted in the question taken strictly in the context of the study are not considered valid. However, at this point, the percentage increase between old and new systems is academic. The relevant issue, as we see it, is whether the Army's budget submission is sufficient. We believe the cost estimate outlined in the FY 84 OMA President's Budget represents the best cost estimate possible within the state of the art.

QUESTION: Assuming a limited growth in future defense budgets, shouldn't these large increases in operating costs cause concern that we will not have adequate funds to operate the new Army?

ANSWER: The increases in operating costs of new systems have attracted the attention of the Army leadership. The Army Force Modernization Resource Management System (AFMRMS) allows us to estimate our operating costs throughout the five year defense plan. We have taken, and will continue to take, changes in operating costs into consideration as we formulate our budgets.

QUESTION: In 1982 and 1983 the Army overbudgeted roughly $100 million to operate modernized equipment because weapon systems delivered slower than anticipated. Do you believe that the budget is accurately priced for these support costs?

ANSWER: The cost estimate outlined in the FY 84 OMA President's Budget is accurately costed based on 1982 Army Modernization Information Memorandum (AMIM) cost factors and fielding distribution plans. We have also already taken into account some possible (but unknown now) system slippages. A recent review of this program based on fielding distribution plans published earlier this month indicates the slippage has yet to materialize.

Expanded Basic Training

QUESTION: The Army added an extra week of basic training in FY 1982. What has been the effect of this change and the costs associated with an extra week?

ANSWER: The primary goal of Basic Training is to transition a civilian into a physically tough, disciplined soldier who is proficient in the tasks needed to survive in combat upon arrival in his first unit of assignment. The extended Basic Training program is graduating soldiers who are better disciplined, more physically fit and well grounded in basic combat survival skills. Full implementation of the extended Basic Training program occurred in FY 1982.

The additional week of training cost approximately $21 million. This includes about $5 million in operation and maintenance funds and about $16 million in Reserve Component soldier pay. There is a need for additional time in basic training which Congress should support.

ARMORED COMBAT EARTHMOVERS (ACE)

QUESTION: After many false starts the Army is back again for production of the Armored Combat Earthmover. Considering the pressure on the Army procurement budget for your modernization program, I do not find the case for this new start particularly compelling. Can you tell me why this program is so important and sufficiently important for multi-year procurement?

ANSWER: FY 84 is not a new start for the M9. Procurement was funded in the FY 82 Budget and production continues in FY 83. FY 83 is intentionally unfunded to allow for the fabrication of vehicles and the completion and validation of the Technical Data Package (TDP) necessary for cost effective multi-year procurement beginning in FY 84. The M9 is essential because the Army has no alternative for equipping combat engineers with a survivable system to provide the required front line support: reducing obstacles to ensure mobility, creating obstacles to impede the enemy, and digging-in our critical combat systems. Acquisition of the M9 through competitive multi-year procurement will ensure that this essential item is acquired at the lowest cost.

QUESTION: The Committee is on record as not supporting multi-year procurement for programs during their first year or two. The history of the ACE certainly does not reflect a stability of design. What would be the impact on the program if multi-year approval were not granted by Congress?

ANSWER: Multi-year competitive procurement requested for the M9 is scheduled to begin in FY 84, the third year of production. The M9 has completed RDTE and has been type classified as a standard Army item. In addition, the Army is investing during the initial production program to ensure that a mature, stable design is achieved prior to the quantity buy. Cost effective, competitive, multi-year procurement is a key aspect of the Army's plan for acquiring the M9. If approval for the multi-year program were not granted, cost growth would be expected due to inability of the Army to acquire competitive prices for the entire five year buy and to benefit from the economies associated with a well structured, stable competitive procurement.

EQUIPMENT MAINTENANCE

QUESTION: How does the estimated Fiscal Year 84 backlog of weapon system maintenance and repair compare with that of Fiscal Year 83, considering the increased age of the equipment?

ANSWER: The Fiscal Year 84 backlog is a combination of unfinanced Fiscal Year 83 backlog brought forward into Fiscal Year 84 and new requirements based on usage of the vehicles. As a result, the unfinanced requirement increases by 118 percent, from $93 million in Fiscal Year 83 to $203 million in Fiscal Year 84. The tendency is for the cost to overhaul, repair, modify, or convert an item to increase as the system ages. However, since the Army is using the Reliability Centered Maintenance (RCM) concept, the age of a combat vehicle alone will not cause it to be selected for induction under the relevant criteria. For example, a tank only six years old may be inducted before one that is eight years old if it meets the evaluation criteria as requiring overhaul.

QUESTION: Can the recurring problem of maintenance backlogs be attributed to shortage of spares and repair parts, or manpower limitation?

ANSWER: Neither the shortage of spares and repair parts nor manpower limitations have had a significant impact on the depot maintenance unfinanced requirements. The problem has been in inadequate funding. However, of the $203 million Fiscal Year 1984 depot maintenance unfinanced requirement, $99 million would be performed by industrially funded activities and would require additional personnel to execute if the ceiling on industrially funded manpower is in effect.

EQUIPMENT MAINTENANCE

QUESTION: Will the new systems displacing the older weapon systems in the Army forces significantly reduce the backlog problem?

ANSWER: No. Introduction of new equipment into the force structure will replace some items in the current inventory, but in most instances is additive to the total inventory. Modern equipment is issued primarily on a "first to fight" basis without regard to component. Equipment displaced by new items is reprogrammed into other Active, National Guard, and Reserve units. The effect in the out years will be an overall increase in equipment overhaul requirements. Unless equipment overhaul funding keeps pace without increased densities, we will experience greater backlogs.

QUESTIONS SUBMITTED BY SENATOR MCCLURE

MODERNIZATION

QUESTION: How long will it take to modernize the Army force structure with M1 tank, M2 Bradley Fighting Vehicle, new artillery, and AH-64 Apache helicopter?

ANSWER: The Army plans to field a mixture of new generation and improved older generation equipment such as M1 and M60A3 tanks. Currently approved and programed procurement quantities are insufficient to modernize all active, national guard and reserve units completely. Modernization is a continuous process. Present plans call for the fielding of several of the major systems cited well into the 1990's. Many systems will continue to be procured until the next generation of equipment is developed and production commences.

QUESTION: If cuts in defense budget authority and outlays are required, how will the Army's modernization, current force structure and readiness be affected?

ANSWER: Our FY 84 budget is just beginning to make up for years of inadequate resources; therefore, any reductions would have a significant impact on our ability to provide the Army that we need in order to meet the ever-expanding threats to our security and national interests. Our first priority continues to be readiness, with special emphasis on equipping the total force both by filling existing shortages and by modernizing the force with new, more capable equipment. Additionally, we have already had to make a tough decision to accept a smaller Army than is required, so our flexiblity in pay and operating accounts is extremely limited. However, the requirements to eliminate any significant amounts from our budget would impact virtually every area of the budget. While it is impossible to say precisely what we would cut, I would anticipate the following sorts of actions:

- Elimination of at least one major weapon system, and reduced production rates for others. Any major reduction in our force modernization program would be felt throughout the Total Army to include our equipment program for the Army National Guard and Army Reserve.
- Drawing down of our planned force structure. In the context of a large budget reduction, some force structure reductions, to

include base closures in the United States, would have to be given serious consideration, even though such cuts have historically generated relatively small dollar savings at the expense of serious impact--both real and as perceived by our potential enemies--in our ability to meet the threat.

- Curtailment of successful readiness initiatives. A wide range of programs, all of which are enabling us to make long-needed improvements in the day-to-day readiness of our forces, would be reduced or eliminated. This would probably include unit and individual training programs, depot maintenance activities, spare parts and upgraded organizational maintenance, and quality of life initiatives which are of direct benefit to our soldiers and their families. General Meyer and I have stated that today's Army is far more ready than it has been in recent years, and a major budget cut would slow or completely stop the momentum we have been able to establish with your past support.

Before proposing cuts to the Army's budget, the committee should realize that without a steadfast, efficient Army program, the gap between Soviet and US battlefield capabilities, especially in the quality and quantity of warfighting systems, could reach disastrous proportions. Reductions or even status quo in modernization and readiness programs and a reduced force structure will increase significantly the risk of early combat failure. As long as the threat places the demands on us that it does, we must continue to supply capability through an adequate budget.

COST SAVINGS VERSUS READINESS

QUESTION: One idea has been proposed to me which sounds interesting, and which addresses the problem that over one half of the Defense Budget is spent on personnel costs. The idea is to transfer 10 percent of our Active duty manpower, especially troop units, to the Reserves. Would such a transfer result in any personnel cost savings or any degradation in readiness?

ANSWER: The proposal would have a major adverse impact on the Army's ability to accomplish its mission and would increase costs through FY 88. To accomplish its multiple missions, the Army must maintain appropriate balance in three major areas: among type forces (e.g., divisions, other combat, support), between Active and Reserve Components and between forward deployed and CONUS Active Forces. Any AC to RC force structure transfer must consider the unique capabilities and requirements of each of these areas. The Army is placing increased responsibilities on the Reserve Components. The RC currently provides 51% of all Forces to include 51% of combat maneuver battalions, 69% of non-divisional combat forces, and 67% of tactical support forces. Additionally, the RC is programmed to assume one additional roundout brigade and six roundout battalions, consolidate six existing brigades into two additional divisions and increase its authorization by 30,000 by FY 88. Concerning the Active Forward Deployed/CONUS balance, the current ratio is 43% of the total Active Force Forward Deployed, 27% in CONUS based deployable forces and 30% in the training and sustaining base. The Army is not now able to meet its goal of a 36 month CONUS tour for many of our enlisted specialities and is accomplishing with difficulty 24 months between overseas tours for NCOs in 129 of 354 skills.

If required to cut the Active end strength by 10% the Army would have to:

a. Cut a division and other major combat units in Europe.

b. Increase the number of POMCUS sets in order to meet NATO reinforcement requirements.

c. Cut other combat and combat support units in CONUS.

d. Create comparable new RC units to replace AC losses. Impacts of such a move would be severe on the Army's readiness, on warfighting capability, on our deterrence and on the Army itself. Concerning readiness, RC units are inherently less ready than equivalent AC units due to less time to train and the time delays of mobilization. Additionally, it would take approximately 4 years to activate, equip and train new RC units, creating lost capability if the AC units inactivated at the time the RC transfer began. The impact on warfighting capability includes: a Division plus reduction of USAREUR combat power; replacement of forward deployed or rapidly deployable AC units with less deployable RC units; an increased USAREUR reinforcement requirement; and increased demands on already inadequate strategic lift. Impacts on deterrence include: violation of the NATO commitment; reduction of global credibility; weakening of all alliances; and sending a wrong message to the Soviets. The impact on the Army itself would be severe. A precipitous AC reduction would require a massive Reduction in Force (RIF), would create severe personnel turbulence and would completely disrupt the positive and stable personnel situation the Army currently enjoys. Within the Reserve Components, the ability to assume new missions and force structure would be strained. New construction would be required for armories, training and maintenance facilities. The demands on the mobilization base would be greatly increased. The personnel account alone would result in a cost saving; however, the total cost of such a transfer would increase for the first four years of execution. Major cost increases would include new RC facilities and new equipment (the extra POMCUS set increases total equipment requirements). In summary, a 10% AC strength reduction with equivalent RC increase would significantly reduce the Army's ability to accomplish its mission; would disrupt stability in both the Active and Reserve Components, would weaken alliances and deterrence, and would increase costs for at least four years.

EQUIPPING RESERVE FORCES

QUESTION. If Reserve Forces are the cheapest kind of force to maintain, how is the Army doing in equipping and training its Reserve Forces?

ANSWER. Reserve Forces, the Army National Guard (ARNG) and US Army Reserve (USAR), are indeed cost-effective for those missions which permit the Reserve units time to mobilize. The Army has assigned those of its missions and functions which best fit that criterion to the ARNG and USAR.

Missions assigned to some Reserve Components (RC) units have become more demanding in recent years, and those units have received concomitant increases in priority. Such units in the RC are beginning to receive more equipment including some modern equipment, and their readiness has been enhanced. However, the total amount of equipment is finite, and problems will persist throughout the Army for some time to come.

In the matter of training, progress has been more satisfactory. There have been significant improvements during the past year particularly in the RC major combat units. Initiatives for this year and FY 84 will insure that the Army RC maintain their momentum. CAPSTONE (alignment of Army RC units with their gaining wartime commands) is expanded in FY 84 to all theaters. The FY 84 budget includes funds for Army RC training with Active units, selected Army RC overseas deployment training and extended annual training periods for selected RC units participating in joint exercises, both in CONUS and overseas.

CHEMICAL WARFARE

QUESTION. Given the Soviet offensive and defensive chemical warfare capability, how can the Army best deter and defend against the Soviet CW threat?

ANSWER. A chemical warfare (CW) program for deterrence must be based upon a combination of several components. Absence or a deficiency in any one of the following will weaken the deterrent value of the entire program: (1) A strong CW defensive posture to enhance individual survival and sustained unit operations; (2) A strong national policy that clearly conveys to any enemy that the US resolve to retaliate with chemical weapons is firm and unyielding should the enemy initiate chemical warfare; (3) US doctrine and procedures for employment of chemical weapons that convinces an enemy that US forces understand the enemy's vulnerabilities and we know how to attack those vulnerabilities to achieve maximum degradation in his combat power; (4) Chemical munitions and delivery systems to execute retaliatory strikes quickly and effectively. Only when the Army, in combination with the other Services, achieves the capabilities listed will an effective CW deterrent be realized and be perceived as such by the Soviets. Only when these capabilities exist will the Soviets feel the need to deal seriously with CW arms control issues.

Currently, US CW retaliatory munitions and delivery systems are deficient in both quantity and effectiveness. To compensate for this lack of a credible CW retaliatory capability, neither tactical nuclear weapons nor a strong CW defense capability will suffice. Now that nuclear parity is a fact of life, the deterrent value of our tactical nuclear weapons in preventing the enemy from using his CW capability has seriously waned. A strong CW defense poses no threat to the enemy and by itself is not a deterrent. History clearly shows that CW can be deterred only when each side fears CW retaliation.

The meaning is clear. Our Army can best defend and deter the Soviet CW threat by continuing to correct the deficiencies in our own CW programs, the most serious of which is our retaliatory capability. The Army, in conjunction with the other Services, needs a modern, effective retaliatory capability. Our binary munitions program must proceed with urgency.

Pershing II

QUESTION: Will the Army's Pershing II IRBM deployment be on schedule to reach an initial operational capability in the Federal Republic of Germany in late 1983.

ANSWER: Yes. The Army's deployment and production programs are on schedule and will allow us to meet the initial deployment date of December 1983. However, without restoration of fiscal year 1983 procurement funds by mid May 1983, the Army will be forced to terminate fiscal year 1983 production activities resulting in a production gap and a delay in attaining full deployment.

ANTI-BALLISTIC MISSILE SYSTEM

QUESTION: If the Army were asked to deploy an Anti-Ballistic Missile system on an urgent, top priority basis, what kind of ABM system would the Army deploy, how soon could it be operational, and what would a crash program cost?

ANSWER: The type, cost and availability of an effective BMD system is largely dependent upon the nature of the defended target. Traditionally, the role of ballistic missile defense has been to enhance the survivability of intercontinental ballistic missiles. Even with an ICBM defense, the kind of BMD system deployed would depend upon such factors as the ICBM basing mode, hardness levels, spacing, and whether the defense is to be ABM Treaty constrained or unconstrained.

For example, an effective ABM Treaty constrained defense of Peacekeeper in Closely Spaced Basing could have an IOC [deleted] and is estimated to cost approximately $12 Billion (FY 82 dollars). In this defense, [deleted].

For a widely spaced basing silo defense, an effective BMD system could be deployed but not within ABM Treaty limits. Such a system deployed in support of this alternative would be [deleted]. With a crash program, the system would be operational [deleted] and would cost around $18 Billion (FY 82 dollars).

MILITARY REFORM MOVEMENT

QUESTION: Please give the Army's critique of the major proposals of the military reform movement as they affect the Army, for example, the virtue of maneuver warfare, motorcycle battalions, unit integrity, etc.

ANSWER: The Army has reviewed these proposals in the same manner that it reviews comments and ideas from any sector which address enhancing the Army's capability to win on the battlefield. While the Army does not fully agree with various findings and conclusions, it does share many of the same concerns and goals and it has charted a course to attain those objectives.

A Declining Military. The Army is also concerned that we demonstrate to the American populace a clear ability to apply the resources given to DOD towards improving our capabilities to win. The support of our nation's people in this effort is indeed crucial. The Army is working hard with Congress, with OSD, and with other agencies to improve our ability to employ the resources entrusted to us. The Army has the requisite expertise and vision to move ahead.

Nevertheless, the Army cannot support an allegation that its military capabilities are declining. In real terms, the net combat capability of the Army is in fact improving. We are just now beginning the long-delayed modernization of our forces. It represents the largest modernization effort in our history and we are aggressively assimilating the enhanced capabilities of the new equipment into new tactics and new ideas. Further, the Army is assuring during this program period that the many longstanding readiness deficiencies are being redressed to restore the full strength of our combat units.

Instead of citing declining military strength per se, the Army would suggest that what is really at issue is the unsettling fact that the Soviet Union's military might is improving faster than ours. After unprecedented demands upon its populace, the Soviet Union is modernizing and expanding its forces at a rate heretofore not witnessed in peacetime. In that perspective, then, our power is declining in a relative sense even as it improves. We therefore urge the recognition by Congress that its support is vital in assuring continued growth over the remainder of this decade.

Training and Cohesion. Increasing the tempo and effectiveness of tactical training is a particularly important element of readiness and a war winning capability. The Army has already begun to address the need for increased emphasis on opposing force tactical training. The Army's National Training Center at Ft. Irwin has been developed for just that purpose.

A well trained, cohesive Army, as free of turbulence as possible, has been a long-standing Army objective. The Cohort Program, initial steps to implement a regimental system, decentralization of some personnel management functions, lengthening of command tours, and many other Army initiatives are headed in a direction which will increase cohesion.

Firepower ("Attrition") vs Maneuver. While the Army has never been wedded to a strategy or doctrine of attrition, it recognizes that some of its past doctrinal literature (the July 1976 FM 100-5 for example) did not provide a sufficiently balanced treatment of maneuver. The recently published FM 100-5 and the AirLand Battle 2000 are just two examples of the Army's recognition of the need for strategic and tactical maneuver.

The criticisms often place too great a reliance on maneuver as a panacea for meeting the demands of the modern battlefield. Both fire and maneuver must be melded to the realities of military objectives, the nature of the threat and realities of the combat environment. No simple tactical formula will suffice.

Complexity and Cost of Systems. The Army, too, seeks to field effective weapons systems--weapons which can be simply operated, relatively easily maintained and supported, and capable of defeating the demanding threats of the modern battlefield.

The Army is improving its research, development and acquisition program by using advanced technology to (1) simplify equipment operation and maintenance, (2) reduce support requirements and (3) provide a less personnel intensive force.

Complaints regarding the sophistication of US weapons completely ignore the realities of the modern, heavily armed threat confronting us. Some elements clearly believe that defense can be procured cheaply. In their views, procurement of simple, small (and thus less costly) weapons systems and adoption of doctrinal/tactical reforms constitute a less costly route to a winning defense establishment. The fact is, the Services are rebounding from a decade of neglect to national defense. While we seek the most effective use of scarce defense resources, there is simply no cheap short cut to a strong, adequate national defense.

Ultra-Light Battalion. In the force design of Army combat organizations, maneuver is only one facet of the equation and firepower must also be included. The requirement for light forces with mobility and combat power is fully recognized by the Army and the High Technology Light Division (9th Infantry Division) is developing and evaluating light infantry maneuver concepts. The concepts for employment of both aviation and ground maneuver vehicles, to include motorcycles, are involved in this effort.

Competitive Bidding in Procurement and Contracting

QUESTION: What measures are being taken to increase competitive bidding in Army procurement and contracting?

ANSWER: The Army has taken positive measures to enhance competition. Significant steps taken are:

a. An Advocate for Competition has been designated at each contracting activity to monitor competitive statistics, assure competition is considered in all acquisitions, review and approve all sole source justifications and brief the Heads of Contracting Activities (HCA) concerning competitive performance.

b. In order to increase competition each HCA has established a comprehensive management plan tailored to the unique functions of the individual activity. Some of the actions initiated include the establishment of sole source justification review thresholds, publishing criteria for determining whether a proposed noncompetitive acquisition is justified, additional emphasis on component breakout possibilities, increased use of bidders mailing lists and R&D source lists, and encouraging prime contractors to maximize subcontract competition.

c. Quarterly competition reporting requirements have been established.

QUESTIONS SUBMITTED BY SENATOR ANDREWS

ADEQUATE RESOURCES

QUESTION: Your budget would increase Army spending about 13 percent this year. Is the Army confident that there will be enough resources to cover the equipment specified in the Administration's 5-year plan as well as enough money to operate and maintain all the new or modernized equipment and weapons systems?

ANSWER: The Army believes that there are sufficient planned resources identified in the Administration's Five Year Program both to acquire the equipment specified in that plan as well as to operate and maintain the new and modernized weapons systems.

The Army has considered the affordability of operating and supporting (O&S) new equipment when formulating the budget and these O&S requirements are clearly stated in the program and budget documentation. The Army Force Modernization Resource Management System (AFMRMS) develops program and budget O&S cost estimates for force modernization. The Army Modernization Information Memorandum (AMIM) provides planning cost factors and equipment distribution plans. Based on this information, MACOMs estimate their operations and support requirements and, after careful review at the departmental level, these are extended into the Army program and budget estimates.

O&S requirements for new systems are budgeted consistent with delivery schedules, with the allowance for slippage and the two year lag from procurement to O&S impact. The appropriate balance between procurement and O&S exists in the present budget and Five Year Defense Program. Army is continuing efforts to collect actual operating and support costs for new equipment in order to confirm O&S estimates.

Warranties on Tank Engines

QUESTION: Under multi-year procurement, the Army has requested 720 M1 tanks, considerably less than last year's projection of 1,080 for fiscal year 1984. The M1 was supposed to cost several hundred thousand dollars and it's now about $2.8 million per tank. Last year, Congress directed that the production of M1's could not exceed 60 a month until the Army reported to the House and Senate Appropriations Committees that the powertrain durability requirements have been met. The M1 transmission breaks down and the tank doesn't work well under simulated battlefield conditions. I have the same transmission in my tractor with a 3-year warranty. What comment do you have on possible statutory language requiring engine warranties on future buys of the tank?

ANSWER:

General Meyer: First, let me clarify that the M1 tank is not being procured under a multi-year contract, but the fire control, one of the more costly components, is under a multi-year contract and has saved the program 68 million dollars.

The M1 tank performed in a superb manner during the recent REFORGER exercise in Europe and demonstrated that in a real field environment the Army can expect M1's to be available to perform its combat mission well over 90% of the time.

The transmission was designed to government requirements and built under a correction of deficiencies clause during the first two years. This is a limited warranty type of contractual arrangement and allowed the Army to develop corrections without additional cost. Earlier transmission problems were fixed and have not recurred.

The key element in powertrain durability is the engine and both AVCO Lycoming, the producer, and the Army have established a vigorous program to ensure the durability of the engine will meet its allocated portion of the durability requirement. Current plans call for a restart of the powertrain durability test this summer.

A statutory requirement for engine warranties would hamper the Army's ability to negotiate a contract with the engine producer to ensure that not only is the engine under warranty but that in field service, the engine will be available when needed. Warranties must be carefully constructed to ensure operational availability, and not just statistical performance.

While your tractor is located on a farm with a dealership nearby, Army tanks are located worldwide. The Army has developed supply and maintenance systems to account for this. Though warranties are beneficial under some circumstances, they would also require us to provide additional engines in the supply system to account for transportation delays or AVCO, the engine producer, would have to establish "dealerships" wherever the Army has tanks. In any case it would cost the Army more money and require extraordinary measures to ensure operational readiness is not impaired.

Division Air Defense Gun

QUESTION: The Army has cancelled its own reliability, availability, maintainability, and durability (RAM-D) tests for the division air defense (DIVAD) gun. As a result, the prime contractor has the full responsibility to design, test and produce this defense gun to meet the general Army specifications. The General Accounting Office has expressed concern that this concern that this action is "unique" in that it departs from the normal practice of having a new system tested and evaluated by Army agencies independent of the project manager and the contractor. Further it states that the DIVAD has had less government testing and evaluation than new systems usually receive. It recommends that the Army should test the gun to confirm its reliability and maintainability before exercising its next production option for 96 systems which is due in May. Isn't this testing practices a little like passing your driver's license exam because you corrected it yourself? At $5 million a shot for the gun, don't you think we have more of an obligation to the taxpayers to make sure it does, in fact, do what it's supposed to do?

ANSWER: The General Accounting Office recommended that the Army conduct a thorough assessment of the program prior to exercising the second production option. The Army plans to conduct this assessment and will brief those results to the Under Secretary of the Army prior to executing the option. We feel confident that the DIVAD system will meet it's eliability requirement prior to being fielded. We have increased our reliability, availability, and maintainability testing early in the production testing and have intensified our test efforts in the subsystem qualification tests. Most importantly, perhaps, the DIVAD contract provides a great deal of protection to the government. We have a fixed-price incentive contract with Ford Aerospace that states that they must meet our reliability specifications during initial product testing or bear the financial responsibility of repairing the system until it meets those specifications.

CANCELLATION OF DIVAD

QUESTION: In its annual report to Congress, the Congressional Budget Office suggests cancelling the DIVAD program, along with some programs of the other services, as a way to realize long-term savings. If this program were cancelled, what effect would this have on the defense of our troops overseas?

ANSWER: Our combat forces overseas are predominantly heavy forces -- armor and mechanized infantry. The DIVAD was developed to fill a critical void in their air defense. No other system exists that can protect the front line maneuver forces against attack helicopters as effectively. The DIVAD has the rapid reaction time, all weather capability, and increased firepower necessary to counter this significant threat, as well as the mobility and armor protection to move with armor and mechanized forces and survive on the battlefield. If the program were cancelled our combat troops overseas would not have adequate protection against their most significant air threat.

BALLISTIC MISSILE DEFENSE

QUESTION: There is a 43 percent increase in the Army request to fund the Ballistic Missile Defense Systems Technology Program and a 20 percent increase in the Ballistic Missile Defense Advanced Technology Program. Is BMD still being considered in terms of a long-term survivable basing system for the MX. What effect would a loss of the MX have on these two programs?

ANSWER: While BMD is still being considered as a major potential contributor for assuring the long term survivability of Peacekeeper, the overall BMD program - the Advanced Technology

Program and the Systems Technology Program - has been structured to provide viable defense options for guaranteeing the survivability of many high value strategic assets to include all land-based ICBMs and other military targets.

Even if MX is not deployed, BMD will remain a major potential factor in any solution to the ICBM vulnerability problem. Defense of Minuteman will be an option as will defense of new ICBM concepts. The ongoing BMD program is applicable to all these possibilities. As a result, the Systems Technology Program must continue to do the type of work now underway, at about the current levels, if BMD is to be a factor. In addition, lead time analyses and other efforts associated with numerous deployment possibilities will need to continue at the pace necessary for providing a timely response to a deployment decision. The Advanced Technology Program is a level-of-effort research and development program not tied to any specific ICBM system or basing mode. It investigates new technologies for future applications so as to provide a means to maintain technological advances and avoid technological surprises by potential adversaries and would not be affected at the loss of the Peacekeeper program. The 20% increase requested will only bring the Advanced Technology Program back to the level-of-effort sustaining technology program which was envisioned by the Congress in the late 1970s.

QUESTION: What recent advances have the Soviets made in their BMD system?

ANSWER: [Deleted].

Personal Defense Weapons

QUESTION: $3.9 million has been requested in your FY84 budget for 11,500 9mm Personal Defense Weapons. The Army cancelled its 1983 procurement action and the Secretary of Defense concurred because it failed to meet testing requirements. Is this weapon considered reliable?

ANSWER: After cancellation of the previous procurement, the Army, in coordination with other Services, revised the Joint Service Operational Requirement (JSOR). This revised JSOR, approved by the Office of the Secretary of Defense on 26 August 1982, requires the 9mm Personal Defense Weapon reliability to be superior to the .45 caliber pistol currently in Army stocks. If the Coast Guard confirms their requirements and the Congress approves the Services' budget request, the Army will test, select, and procure a 9mm handgun for the Armed Forces which meets this requirement.

EQUIPMENT FOR THE GUARD AND RESERVE

QUESTION: In the FY 84 defense budget $500 million is for Guard and Reserve equipment according to previous testimony. Can you provide the figures and the equipment for the Army National Guard and Army Reserve?

ANSWER: In his 16 February testimony, the CSA indicated that just under $1 billion was currently projected to go to the Guard and Reserve from the FY 84 Procurement Budget. The Army procures and addresses the equipment needs of the Reserve Components within the framework of the total Army. The Army has developed a reporting system that displays the quantity and dollars of new end item procurement that is currently projected to be delivered to the Reserve Components. The information on the FY 84 Budget will be available after 15 March 1983.

Light Command Post Carriers

QUESTION: Why is the Army requesting 652 Light Command Post Carriers, for the first time in several years?

ANSWER: The 652 M577A2 Command Post Carriers will reduce current shortages that will grow when the Army reorganizes under Division 86, which has increased command and control capabilities and vehicle requirements. Foremost among the new requirements are 150 for the fielding of MLRS, and 253 that are required for the reconfiguration of artillery batteries from 3x6 (three batteries with six guns in each battery) to 3x8 (three batteries with eight guns in each battery). This reconfiguration permits each battery to perform split battery operations, which increases survivability and fire support coverage and requires additional command and control vehicles. The FY83 Army Budget did contain 114 M577A2 Command Post Carriers. These were identified to support initial MLRS fielding but were deleted by Congress.

REMOTELY PILOTED VEHICLES (RPV)

QUESTION: Why is there nearly 80 percent increase (from $77.7 to $138.1 million) in Army R&D funding for Remotely Piloted Vehicles?

ANSWER: This increase is due to additions and to full Army funding of this critical Army program. Increase can be attributed to the following:

a. $34.7 million for the start of full scale development of a Forward Looking Infrared (FLIR) mission payload to provide a night/limited adverse weather capability for RPV. This is a preplanned product enhancement, and FLIR mission payloads will be integrated in production so that we end up with 60% of the air vehicles with a night (FLIR) capability and 40% with a day (TV) capability.

b. $25.7 million is for the fabrication of two additional sections (10 air vehicles and 2 ground systems) to provide a limited early operational capability with the third U.S. Corps at Ft. Hood, Texas in 1985. This responds to FY82 Congressional guidance..." to ensure that opportunities for early fielding can be provided," and will:

(1) Provide early training and operational concept test experiences.

(2) Provide systems for overseas deployment in case of national emergency.

(3) Facilitate transition into production by enabling early check-out of tooling and design of the production line.

Auditing of Costs

Question: In cost estimates and auditing, what procedures does the Army follow with regard to costs a contractor attributes to inflation, to ensure that inflation does not become a "catch-all" category for other cost increases?

Answer: When a contractor's cost estimate is audited by the Defense Contract Audit Agency or reviewed by the contracting officer, all possible efforts are taken to assure that the estimated costs are based on current and complete cost data. Pursuant to the provisions of P.L. 87-653 (Truth in Negotiations Act), a contractor is required to certify that the cost data he has submitted is current, accurate and complete. If it is later determined that a contractor has submitted incorrect data, the dollar effect of the difference is reduced from the contract.

If it is noted that a contractor's estimated contract costs include projections for anticipated future inflation, action is taken to assure that such projections are reasonable. In some cases where contract performance will extend over an extended period, the contract will contain an economic price adjustment clause to recognize economic changes beyond the time period which can be reasonably anticipated. If, due to inflationary increases, a contract adjustment is necessary, the amount of the adjustment is unrelated to the contractor's actual costs but is computed, based on the provisions stated in the EPA clause contained in the contract. Since published Bureau of Labor Statistics are the basis for calculating net economic change, such contract price adjustment cannot be considered a "catch-all" for other cost increase which the contractor may have experienced in performance of his contract.

EQUIPMENT FOR GUARD AND RESERVE

QUESTION: I was pleased to see that Secretary Weinberger, in a June memorandum to the Secretaries of the Army, Navy, Air Force and the Chairman, JCS, reemphasized DOD directive 1225.6 that units that fight first shall be equipped first regardless of component. He ordered that the equipment inventory reporting system identify obsolete as well as quantitative shortages in Guard and Reserve equipment; that the Services evaluate the progress of Guard and Reserve equipment fill; present a plan to correct deficiencies; and evaluate to what degree the respective Services are meeting the annual program and budget projections.

Can you provide this committee with the progress the Army has made to implement these directives?

ANSWER: With regard to identifying obsolete items and shortages, the Army uses a monthly asset reporting system to identify obsolete equipment as well as on hand asset positions while shortages are depicted quarterly through a distribution process.

In reference to equipment fill, an analysis of Army equipment fill is conducted semi-annually for the total Army to include Army National Guard and US Army Reserves. Fill rates are examined in relationship to the claimants and their assigned missions.

With respect to correcting deficiencies, several programs are now operational which identify shortages of equipment. While the Army distributes by priority to the total force which is consistent with DOD directive 1225.6, the Reserve Components are identifiable within the programs. These programs consist of deliberate distribution decisions and priority assignments consistent with wartime mission.

With respect to program and budget projections, the Army in support of the FY 84 budget began identifying what portion of the annual Army procurement budget was projected for the Reserve Components. A comparision of actual distribution to projections will be contained in the Force Readiness Report provided to Congress 15 Feb each year.

CONSTRUCTION AT CAMP GRAFTON

QUESTION: Military construction programs do not come under the authority of this subcommittee. However, I would like the Army to furnish information on the status of proposals to improve and construct the all-weather barracks, dining facility, and other support facilities for the various battalions of the Army National Guard at Camp Grafton, North Dakota. The National Guard Bureau advised me early last December that the paperwork for the construction of these projects in FY 1984 fell through the cracks, but that "attempts would be made to accelerate the construction of the projects ahead of their current FY 85 program schedule."

Would you provide the current status of these proposals?

ANSWER: The National Guard Bureau and the North Dakota Army National Guard are working in concert to expedite the designs of the barracks, dining facilities, and other supporting facilities at Camp Grafton, North Dakota. Currently, the preliminary designs are under review and it is anticipated the final designs will be completed by the end of May.

These construction needs remain as priority candidates for accomplishment if resources become available in FY 1984.

CAMOUFLAGE SCREENS AND EQUIPMENT

QUESTION: Army Assistant Secretary Sculley has indicated in his letter to Senate as well as to Devils Lake Sioux Manufacturing Corporation that the quantity of camouflage considered by the Army for DLSMC was 36,000 units per year and not 50,000 units. We have been informed that the Army has consistently planned forthcoming up until September 24, 1982. At that time, the Army redirected its procurement activity and reduced the share apparent to DLSMC.

Can you tell us why this change was made?

ANSWER: For several years, the Army's sole producers of camouflage systems have been the Brunswick Corporation and the Devils Lake Sioux Manufacturing Corporation (DLSMC). We wanted to ensure DLSMC had the opportunity to continue to participate in the program while we structured a strategy to introduce competition. In mid-1982, the Army circulated to industry for comment a draft Request For Proposal (RFP). Both small and large businesses expressed intense interest in the program and made recommendations as to how the program could be structured to enhance competition. Subsequent to circulating the draft RFP to industry, the Army had to adjust its requirements upward. During the development of the acquisition plan for this item, one of the alternatives was for 50,000. However, considering all factors, the Army increased the quantity planned for DLSMC from 30,000 units to 36,000 units and planned competitive quantities for both small business set-aside and unrestricted competition.

QUESTION: In view of the outstanding record of performance on quantity, cost and schedule as exemplified by the many awards, including the CAP Award, why are you apparently limiting DLSMC's participation in this program, if they would be successful in competing for the small business set aside. There appears to be breaking of the previous commitment on the 8A portion, if DLSMC was also successful in competing for the small business set aside. This certainly limits the job opportunities and could affect a reduction of 100-130 people.

Can you not guarantee at leat the 36,000 modules a year, plus any additional units on the small business set aside?

ANSWER: The multi-year program was structured to provide an opportunity for large businesses, non 8(a) small businesses and DLSMC to participate in the program. Over the years, the quantity of units awarded to DLSMC under the 8(a) program has increased. For example, in FY 79 and FY 80, the annual quantity was 20,000 while in FY 81 and FY 82, the annual quantity was 30,000. The Army has indicated that DLSMC will be awarded at least 36,000 units annually during FY 83-FY 85. These guaranteed quantities, which represent a signficiant increase over prior awards, should insure a stable workforce base on which DLSMC can build as they become competitive in other product lines. Any guarantee beyond that would adversely impact our efforts to introduce competition into this program.

QUESTION: In view of President Reagan's program intended to create business ventures on Indian reservations by private industry, and the outstanding model of a successfully proven joint venture by industry and DLSMC, isn't this limitation going against the Administration's policy?

ANSWER: The Army's camouflage program continues to be an outstanding example of the success of the Administration's policy. As stated in the answer to the previous question, the number of camouflage systems procured from DLSMC annually by the Army has increased by 50% between 1980 and 1982 (from 20,000 to 30,000) and is projected to increase by an additional 30% in FY 83 over FY 80 procurements. It is clear from the Army's record that the Army strongly supports the policy of providing business opportunities on Indian reservations.

QUESTION: Although Congress is always for more competition to get the best price for the government, what assurances are being taken that the quality of this sophisticated and highly technical camouflage product will be maintained and not jeopardized by some low priced bidder? Also, since the support systems and screens are now being bought separately on the small busines set aside, what assurance is the Army taking that they get both screens and support systems delivered on time and together?

ANSWER: All offerors are required to submit a written technical proposal with their priced Request For Proposal (RFP). Additionally, offerors who are submitting proposals on the camouflage screening solicitations must submit a 15 yard color coded sample of the cloth, technical proposals and the Army will make on-site preaward surveys of the low, responsive offeror prior to award. This procedure should insure that the government receives a product which meets its specifications. We are also having each offeror on the support systems submit a technical proposal which is being evaluated as stated above. Pre-award surveys will also be conducted on the support systems. Delivery of support systems will be earlier than the screen systems since the support system is less sophisticated. As the screens are received, they will be married up with the support system at the depot.

QUESTIONS SUBMITTED BY SENATOR STENNIS

GROUND LASER LOCATOR DESIGNATOR

QUESTION: The conference report accompanying the fiscal year 1983 Defense Appropriation Act directed Army to budget for an economic procurement quantity of the Ground Laser Locator Designator, "based on a production rate of 20 per month in fiscal year 1984." Yet, the P-1 document reflects a request for 105 units at a cost of $46.8 million. Could the quantity be in error in this document?

ANSWER: Yes, the quantity of 105 units reflected in the P-1 document is in error. Following the FY83 Defense Appropriation Act, which eliminated the FY83 funding for Ground Laser Locator Designator (GLLD), the funding request for FY84 was increased from $32.2M to $46.8M by the Office of the Secretary of Defense during the Program Budget Decision cycle. Not available at the time of the P-1 submission was the quantity estimate of 180 units associated with the $46.8M funding request. This quantity will provide for a 9 month production period starting in January, 1984. The Army is anticipating a "new start" definition of the GLLD program based on the zero program in FY83. Appropriate Congressional language in the FY84 Defense Appropriation Act would be necessary to preclude a "new start" definition.

Stinger

QUESTION: Where do we stand on the Stinger-POST program? This is a passive optical seeker version of the shoulder-fired air defense missile. Have the production problems with the ultraviolet detector been resolved?

ANSWER: The Stinger-POST production decision was made January 24, 1983. The specific acquisition strategy has not been finalized. The Army's first production of Stinger-POST will be a low-rate production-proofing contract. In November 1982, the Army initiated a program to fully develop an understanding of the process used to generate cadmium sulfide material and fabricate the ultraviolet detectors to more efficiently apply this technology. This program will be completed in April 1984.

Patriot

QUESTION: The Army is planning to increase its low-rate production of the Patriot Air Defense Missile in fiscal year 1984. The General Accounting Office has recommended that the production rate not be increased at this time. Is it wise to increase the rate of 9 fire units and 176 missiles to 12 fire units and 376 missiles when operational tests will not be completed until August 1983?

ANSWER: The Army has carefully reviewed the results of the post Defense Systems Acquisition Review Council confirmation test program conducted to date and is confident that there is minimal risk in making limited increases in the Patriot production rates for fiscal years 1983 and 1984. The test data clearly shows that nearly all the Patriot system performance problems discovered prior to the August 1980 Defense Systems Acquisition Review Council have been corrected. The total program cost savings achieved by increasing Patriot production to a more economic rate far outweight any residual risks that may be associated with remaining at an uneconomical and inefficient production rate. If the Army keeps the fiscal years 1983 and 1984 production rate at the 50 percent production capability rate (9 vice 18 Fire Units), the program will stretch one to two years and the total program cost will increase by at least $250 million.

QUESTION: The General Accounting Office indicated that additional maintenance personnel have to be trained for this system as the built-in test equipment is experiencing difficulty in the identification of faulty components. Would you comment on this?

ANSWER: A maximum of 115 additional maintenance personnel may be added to the Patriot support system to rectify those faulty components that cannot yet be identified by built-in test equipment. Intensive corrective actions are in process to improve Patriot diagnostic capabilities. The number of support personnel actually required may decrease as the built-in test capability ultimately attained becomes known with field experience.

ARMY MILITARY AND CIVILIAN END STRENGTH

Question: The Army is requesting an increase of about 3,000 military personnel and 7,000 civilians over the end strength for fiscal year 1983. Would you comment on how these additional personnel will be utilized?

Answer: The 2600 increase in military end strength from FY 83 to FY 84 results from several increases and decreases. The largest increases reflect initiatives to improve readiness and the accelerating pace of the Army's modernization program. Division 86 is the name given the reorganization of the Army's heavy divisions and accounts for a substantial increase in end strength as well as the increase in officers to improve the leader to led ration in our tactical units.

The 7,200 civilian increase in civilian manpower is in the following areas:

Tactical/Mobility Land Forces	+1000
Intelligence, RDT&E, & Defense Communications	+500
Medical Support	+100
Base Operations Support	-600
Personnel Support	+700
Individual and Force Support Training	+1500
Central Logistics (Supply, Maintenance, and Logistical Support)	+3600
Centralized Support	+300
Management Headquarters	+100

These increases support POMCUS in Europe, RPMA to enhance living and working conditions of the overseas soldier and family; reduces shortfall in training base requirements, and supports the defense communications system and research and development. The increase in Personnel Support is primarily for the centrally managed intern program, the primary Army source for accessing highly qualified candidates for managerial and executive jobs in most professional, technical and administrative occupations. A large portion of the increase in Central Supply, Logistics and Maintenance is for the support of the development and fielding of new weapons systems and also for the Europe Ammunition Program. Centralized Support increases are for combat development activities that support development and integration of new doctrine, materiel systems and organization for the Army. Also included is support for the Army Reserves. Reflected within these numbers is the Army's civilian substitution program. Civilian substitution retains the programed military end strength while increasing readiness through the conversion of military positions in non-tactical units to civilian positions and the assignment of released military personnel to other positions that require military incumbency. In FY 84 2000 military positions are programed to be converted to civilian incumbency.

QUESTION: Mr. Secretary, both your statement and that of General Meyer refer to the Special Operations Forces (SOF). I agree that their mission is most important and they have been of great value to the Nation over the years. But I'm not certain of why we are emphasizing these forces at this time. I believe they came into existence during the administration of President Kennedy. What are we doing today that differs from these deployments in that past?

ANSWER: Our Special Operations Forces (SOF) consist of Rangers, Special Forces, Psychological Operations and Civil Affairs Units. The forces which most readily come to mind when we refer to SOF are our Special Forces, which were first created in 1952 and to which President Kennedy provided outstanding support and emphasis in the early 1960's. Their missions since 1957 have been to conduct unconventional warfare, to train the forces of other countries as part of an overall program of foreign internal defense, and to conduct strategic intelligence operations. There have been refinements of their missions since 1957, but basically their roles have been unchanged. We are emphasizing these forces now for two basic reasons. First, they were reduced in the Active Component by more than two-thirds during the 1970's to allow for the Army's need to modernize its forces and to develop them for the major conventional threat against NATO. This massive reduction severly reduced the capabilities of SOF to perform their missions. Second, we see the need to complement our conventional capabilities with viable Special Operations Forces. These forces can be used in mid to high intensity warfare to support our conventional forces. Also, they are uniquely capable of operating in the low end of the spectrum to assist friendly nations in countering threats posed by Soviet or Soviet surrogate inspired, developed, and supported insurgencies. The ability to operate throughout the conflict spectrum in a measured and appropriate manner is essential to our being able to support the national strategy of deterrence and of responding appropriately to the threat should deterrence fail.

DIVAD Gun

QUESTION: The Comptroller General has recommended that the Army not exercise its second production option on the SGT York DIVAD gun prior to receipt of a detailed assessment of the weapon's testing. There is a request for procurement of 130 systems in the FY 1984 budget. Do you agree with the Comptroller General that an assessment should be made prior to the Army exercising the production option?

ANSWER: Yes, the Army agrees with the General Accounting Office's recommendation that a thorough assessment of the program be accomplished prior to exercising the second production option. The Project Manager plans to brief the assessment to the Under Secretary of the Army in early May 1983.

DIVAD Gun

QUESTION: Isn't it true that the Army cancelled its reliability, availability, maintainability and durability (RAM-D) tests when the prototypes were found to be unacceptable?

When will the RAM-D tests be conducted?

ANWER: The Army did stop formal scoring of the reliability, availability, maintainability, and durability test but did complete all the testing that was scheduled. The DIVAD program has been developed using an accelerated acquisition strategy in which time and money were saved. One of the trade-offs involved in this strategy is that much of the testing normally seen at this stage in a program has been abbreviated in the DIVAD program. We have only two prototypes in existance and for the reliability, availability, maintainability, and durability test at Aberdeen only one prototype was available for use. It became evident early in the attempted reliability, availability, maintainability, and durability testing that the prototype was not suitable for this type of test. The reasons for this are a combination of factors. First, the prototypes have been subjected to almost two and one-half years of almost constant testing and are very worn; second there were an insufficient quantity of spare parts procured to support this amount of testing; and third many problems noted in earlier tests were not corrected in the prototype because corrective action could more easily be made in the production units.

The Army has increased the reliability, availability, maintainability, and durability efforts on the production units and formal reliability, availability, and maintainability will be part of Initial Produciton Tests in early 1984.

QUESTION: Will the Army be able to conduct the RAM-D tests prior to receipt of the initial production units in early 1984?

ANSWER: No, the formal reliability, availability, and maintainability tests will be conducted with production units in early 1984. However, to ensure our confidence that these tests will be successful and that our production units will meet our specifications we have increased our efforts in the area of subsystem qualification tests.

QUESTION: If not, doesn't this offer potential for costly modifications that will have to be made to these early production units?

ANSWER: The potential for costly modification is very low in this program for two reasons. First, the risk of costly system type redesign is low because we have used mature components throughout the DIVAD system. More importantly the DIVAD contract is fixed-price incentive with a fixed-ceiling price. The contractor is required to deliver a product that meets our specification or repair the system until it meets those specifications, all at his expense.

QUESTIONS SUBMITTED BY SENATOR PROXMIRE

Patriot Air Defense System Program

QUESTION: Over the past 2 1/2 years, estimates of the Army's Patriot air defense program costs have nearly doubled. The current program cost estimate stands at more than $11 billion. The contractor is behind schedule because of production problems and the Army has stated that available funds may not be sufficient to adhere to the planned annual procurement schedule.

The General Accounting Office has recommended that fiscal year

1983 funds be applied towards an increase in the production rate over the current level of 9 fire units, only upon a showing in the production tests, that deficiencies have been corrected. That seems like a rational way to proceed with the program. Do you agree?

ANSWER: No, we do not agree. The Army has carefully reviewed the results of the post Defense System Acquisition Review Council confirmation test program conducted to date and is confident that there is minimal risk in making limited increases in the Patriot production rates for fiscal years 1983 and 1984. The test data clearly shows that nearly all the Patriot system performance problems discovered prior to the August 1980 Defense System Acquisition Review Council have been corrected. The total program cost savings achieved by increasing Patriot production to a more economic rate far outweigh any residual risks that may be associated with remaining at an uneconomical and inefficient production rate. If the Army keeps the fiscal years 1983 and 1984 production rate at the 50 percent production capability rate (9 vice 18 Fire Units), the program will stretch one to two years and the total program cost will increase by at least $250 million.

Patriot

QUESTION: How reliable is this sytem? Is it going to fail our soldiers in the field like the Soviet SA-6s failed the Syrians in the Bekaa Valley?

ANSWER: The Patriot and Soviet SA-6 systems are not basically the same system. The SA-6 is similar to the United States I-Hawk. It uses semiactive homing guidance, can engage only one target at a time, at a (d) range. Patriot uses a phased array radar which can simultaneously engage (d) targets while tracking (d) for future engagement at ranges beyond

During Test Unit 3 of the Patriot Verification Program the system, during over 1000 hours of operation using engineering development hardware, demonstrated (d) hours mean time between failures (MTBF). This was three times the goal of (d) hours for this test and over twice the system requirement of (d) hours mean time between failures. Component and system design confirmation tests using production hardware were conducted in the August 1982-February 1983 timeframe. Reliability data scoring and evaluation from these tests is in the process of being calculated. Reliability data will be collected and evaluated during the fourth unit of verification tests scheduled to be conducted February-August 1983.

QUESTION: What are the operational implications of the Army's decision to train additional personnel to maintain the system manually or with other test equipment that will not be built into the system?

ANSWER: The Patriot System Specification states a 99 percent detection requirement of all mission-essential failures during the "on-line" operations (tactical mode). Additionally, during the "off-line" maintenance mode 99 percent of all failures should be isolated by means of diagnostic software programs and manual procedures. Last year, we reported the "off-line" diagnostic software and manual procedures were only isolating the fault about [deleted] of the time. Now, after more than 1600 faults have been evaluated we have observed an isolation rate of about [deleted]. This puts us within the progress envelope we anticipated from the maintenance improvement program we initiated last year. We anticipate achieving a [deleted] capability by the time Patriot is fielded in Europe in mid 1984 and over [deleted] a year or two thereafter. Software programing technology, limited availability of Patriot equipment and time were the limiting factors restraining us from concurrent development of the software necessary to achieve the specified diagnostic capability at this point in time. As an interim corrective measure, we have added a maximum of 115 personnel at the intermediate maintenance level who will use external test equipment and detailed training to repair faults we are not yet able to isolate automatically. This is a reversion to the standard maintenance concept employed on most other systems and is not expected to result in operational problems.

M1 Tank Program

In May of last year, the Department of the Army decided to limit all future M1 tank production to 60 tanks per month (down from 90), thereby stretching out the number of production years by two (to 1990). M1 program officials have stated that the cut is due to OSD guidance that the Army lower its budget ceiling by reducing spending.

QUESTION: Preliminary Army estimates indicate that the proposed stretch-out will add about $3 billion to the total program acquisition cost and delay delivery of the planned quantity of M1 tanks to our forces. Is this still the Army's best estimate of the stretch-out cost and what exactly will be the delay?

ANSWER: No. Our original estimate was $2 billion dollars based on factors known at the time, however, that has been reduced due to revised Office of Management and Budget inflation indices, multiyear contracts, and reduced hardware costs. Our current estimate is that the program stretch-out will will cost about $800 million more when the December 1981 and December 1982 System Acquisition Reports (SAR) are used as milestones. The stretch-out added two years to the program but more importantly, it allows the Army to continue modernizing and to do it in a rational and balanced manner. If the current program, using today's inflation projections, and applying other savings trends, was returned to a 90 per month production rate then a savings of 1.5 to 2.0 billion dollars could be realized.

QUESTION: Did production limitations exist that made an eventual production rate of 90 tanks per month unlikely?

ANSWER: No, there are no production limitations other than affordability. All components of the tank can be produced at 90 per month to support tank production. Planned product improvements did not affect the Army's decision to restrict production to 720 per year even though it is a fact that a more effective tank fleet will result from the stretch-out. That is, we will be buying more M1E1's than in our original plan. This is the only benefit of the program stretch-out.

SUBCOMMITTEE RECESS

Senator STEVENS. At this time of the year it seems strange for us to be here, just the three of us this morning, but the Budget Committee is having meetings, other subcommittes are having meetings. We have to find some way that we can have an overview with all members present one of these days.

We are going to stand in recess now until Tuesday, March 1, when we are going to have testimony from the Air Force and the overview of their 1984 budget.

[Whereupon, at 11:30 a.m. Thursday, February 24, subcommittee was recessed to reconvene Tuesday, March 1, 1983.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1984

TUESDAY, MARCH 1, 1983

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10:55 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, Weicker, Rudman, Proxmire, and Johnston.

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE AIR FORCE

STATEMENT OF HON. VERNE ORR, SECRETARY OF THE AIR FORCE

ACCOMPANIED BY:

GEN. CHARLES GABRIEL, AIR FORCE CHIEF OF STAFF

MAJ. GEN. TRUMAN SPANGRUD, DIRECTOR OF BUDGET, U.S. AIR FORCE

BUDGET REQUEST

Senator **RUDMAN**. The subcommittee will be in order.

I apologize for the chairman, Senator Stevens, not being able to open the hearing. He has very important legislation on the floor and there will be a number of rollcall votes this morning. He will get here if at all possible.

He wishes to apologize to you, Mr. Secretary, and to you, General Gabriel, and General Spangrud.

We are here this morning to conduct an overview of the Air Force budget for fiscal year 1984.

That portion of the Air Force budget within this subcommittee's jurisdiction totals $89.5 billion, which is an increase of $18 billion over appropriations to date for 1983. That increase in budget authority amounts to 25 percent, or a real growth approaching 20 percent. Comparable outlays total $73.9 billion, up $10.4 billion from 1983. That calculates to real growth of nearly 11 percent.

The Air Force this year enjoys not only the sharpest budget growth, but the largest portion of the military budget in relation to its sister services. We will want to explore that growth in funding and attempt to determine why it is needed.

COMPARATIVE TABLE

We will ask the Air Force to prepare, at this point, a comparative table of budget authority and outlays appropriated for fiscal year 1983 and budgeted for fiscal year 1984. This table will be restricted to those appropriations contained in the annual Defense appropriations bill.

Please include the dollar changes and the percentage of those changes as part of the table. We will give you the specifics of our request after the hearing.

[The table follows:]

COMPARATIVE TABLE OF BUDGET AUTHORITY AND OUTLAYS—DEPARTMENT OF THE AIR FORCE

[In millions of dollars]

Appropriation	Budget authority				Outlays			
	Fiscal year—		Change		Fiscal year—		Change	
	1983	1984	Amount	Percent	1983	1984	Amount	Percent
Military Personnel:								
Air Force	12,196.0	12,757.9	561.9	4.6	12,074.9	12,687.8	612.9	5.1
AF Reserve	362.1	383.3	21.2	5.9	356.2	379.7	23.5	6.6
ANG	548.4	593.0	44.6	8.1	540.8	588.2	47.4	8.8
O&M:								
Air Force	16,901.1	18,999.1	2,098.0	12.4	16,653.9	18,453.8	1,799.9	10.8
AF Reserve	765.0	815.0	50.0	6.5	741.9	802.5	60.6	8.2
ANG	1,822.1	1,824.7	2.6	.1	1,769.8	1,804.8	35.0	2.0
Procurement:								
Aircraft	17,595.3	22,707.2	5,111.9	29.1	12,446.5	15,379.4	2,932.9	23.6
Missile	4,958.7	8,570.8	3,612.1	72.8	3,927.9	5,063.6	1,135.7	28.9
Other	5,540.9	7,626.3	2,085.4	37.6	4,978.6	6,418.9	1,440.3	28.9
RDT&E: Air Force	10,625.6	13.652.3	3,026.7	28.5	9,870.3	12,257.0	2,386.7	24.2

INTRODUCTION OF WITNESSES

Senator **Rudman**. Our witnesses today are the Honorable Verne Orr, Secretary of the Air Force, and Gen. Charles Gabriel, Air Force Chief of Staff.

Gentlemen, we have your prepared joint statement which I understand is an excerpt from your 1984 report to Congress. We will print that summary in the record, but ask you to devote your remarks to the major budget issues this subcommittee will be reviewing.

Please proceed.

OPENING REMARKS OF SECRETARY ORR

Secretary **Orr**. Thank you, Mr. Chairman.

We will be brief because we recognize the time constraints on the committee and the fact that this is designed largely for you to interrogate us on questions that are on your mind.

May I say it is a pleasure to be here and to have with me Gen. Charles Gabriel who became Chief of Staff of the U.S. Air Force last summer and before that was head of our U.S. Air Force in Europe.

The health of the Air Force is very good. I quote only the fact first-term reenlistments are 57 percent, second-term reenlistments are 81 percent, career enlistments are at 95 percent.

We are getting a great group of young people in the Air Force and they are staying. Part of this is pay which has been improved in the last few years. Part of it is undoubtedly due to the recession which has prevented them in some cases from getting the jobs they would like.

One very great reason is the increased respect that the people and general public pay to those who have uniforms. My people have told me they are proud today to wear unforms off base that they would not have considered doing as short a time as 10 or 15 years ago.

STATUS OF RESERVES

I would like to mention the place of the Reserves in the Air Force. We have a tremendous respect for, admiration and appreciation of our National Guard and Air Force Reserve. They furnish 50 percent of all our strategic airlift air crews, 60 percent of all our tactical airlift capability, and provide two-thirds of the air defense fighters for protection here in the Continental United States.

General Gabriel will be giving a word about some new equipment going to the Guard and Reserve from the factories.

We are trying to do a better job in procurement. I recently commissioned a study to look at past procurement practices in the U.S. Air Force. It has been entitled what we call A^3 or affordable acquisition approach. It was designed to ask: Have costs gone up? Have times to procure weapon systems increased and if so, why?

That has been made available. It is a nonrestricted public document. There are no surprises in it. It is a challenge to those of us in management to see that the past patterns are not repeated. To make sure they are not, we are undertaking a number of programs. Some of them have been either directed or certainly have met with your full approval.

Those include multiyear procurement. There is an attempt, in the Pentagon, to reduce the number of never-ending reviews which stretch out procurement. We are attempting to make much better cost estimates independent of program managers and to utilize and budget those most likely costs.

We are using management technology where our skills can help a contractor invest a relatively small amount of dollars and come back with major returns.

We are doing much more competitive bidding and we are trying to buy from subcontractors rather than directly from contractors. We have not yet achieved the desired levels, but we are making every effort to get there.

This budget represents stability which is one major factor. We come to you with no new major programs, only continuation of those that have taken place in the past.

When one goes to the field, as both General Gabriel and I do, and sees the great and necessary increased readiness and sustainability of our forces, we are grateful to Congress for their past contributions and we feel the defense of the United States is stronger now than it has been in the past year.

With that I would like to have General Gabriel make a few remarks.

OPENING REMARKS OF GENERAL GABRIEL

General Gabriel. I appreciate the opportunity to come before your committee this morning to talk to you about building the forces to meet our national security commitment.

As you know, the services don't determine what that commitment is. It is handed to us by the administration. We don't control the threat either.

We do say what we feel we need to satisfy the commitment and to counter that threat. That is what this budget represents.

The threat has been growing. It continues to grow. We think we need to continue the momentum that we have managed over the last couple of years in order that we can handle the threat.

STATUS OF FORCES IN NATO

I would like to give you a report card on what return you have been getting for your money over the last couple years and give it to you from the vantage point of the commander in Europe where I was, as the Secretary just mentioned, for 2 years.

I got there in 1980 and we had reached a new low, I think, in many ways. At that time O&M funding was especially low and the flying hours were much less than they should have been. What that amounted to when I visited the bases—I visited every one of them as soon as I got there—you could see the bases needed repairs: the leaking roofs we couldn't fix, the buildings that they were working in, living in, they couldn't paint, and the ramps were breaking up. In my mind morale is a direct part of readiness and they are tied together. It was a shame. I was really ashamed to take some of you gentlemen on those bases when you came to visit.

FLYING HOUR READINESS

At the same time looking at it from the flying hour readiness standpoint, we were getting at that time, per crew, about 14 or 15 hours a month. We were not getting enough time and enough money to deploy at the gunnery ranges to maintain our proficiency in the fighters.

We were not able to manage the squadron exchanges we wanted to conduct with out allies. Air combat training with our allies had to be cut back severely.

At that time the parts and spares situation and the munitions status was very low.

I am proud to say that in 1982 when I left, because of 2 years of good funding—we doubled our funding in some areas, especially in parts and spares, over that time—improvements began to show.

Our flying hours were up. We were able to meet all those training commitments that meant proficiency for our air crews.

Morale was up because our living and working conditions had been improved. We managed to give a lot more money to the bases to take care of things.

So, overall, including the morale and the retention that the Secretary just mentioned, you got a good return on your dollar for those 2 years.

REDUCTIONS IN O&M

But the news is not all good because, as you know, this year, 1983, we took some cuts that set us back. In O&M we had negative real growth this year. O&M is the livelihood of our readiness account.

The collocated operating bases are the bases that take our augmenting forces when we go from the United States to Europe in wartime. We lost the funding for that and this to me is the biggest bargain we could go for right now to improve our capability in Europe.

We have 1,500 fighter aircraft headed that way in wartime and they will not be hitting the ground running like they should be because they don't have enough fuel and ammunition on each of those bases to begin fighting. The fuel and munitions have to be brought in from central storage. When they are brought in they are not protected with hardened fuel oil storage and munitions storage. For every dollar we spend on collocated bases we get $10 worth of facilities that we use on our allied nations' bases.

GLCM FUNDING CUTS

The ground-launched cruise missile was also affected by the 1983 cuts.

For the basic GLCM support, many of our troops will have to go over there in unaccompanied status and stay for 1 year and come back. This is a one-of-a-kind system. The personnel turbulence, I think, will have a bad impact—I know it will—on those people who will have to come back to the States and go back again in a year or so because there is no rotation base.

We need to keep our people there longer with a full tour, not just a remote tour. That is the reason we need this money to support the ground-launched cruise missile bases.

We have lower Tacair procurement.

Finally, the MX testing and the basing will be delayed because the funds were cut.

Let me add just one thing that the Secretary said, about the Air National Guard and the Air Force Reserves. They are the best in the world. We could not get our job done without them. We are proud of them. They are fully integrated into the active force. They are as good as we are. When you fly with them you know that.

We are giving aircraft direct from the factory to the Guard. One-third of our A-10's today are operated by the Guard and Reserve forces. We are sending F-16's, as you know, to the Guard this year for the first time at McEntire, S.C., next year to the Reserves at Hill AFB in Utah, and over the next 5 years F-16's and F-15's will be going into the Reserve forces. So, they are that good, they can handle the best equipment and we depend on them very heavily.

Finally, Mr. Chairman, let me say that you have a strong Air Force, the best in the world, in my opinion. Our people make it that way. We have the most talented people we have ever had in the Air Force for many reasons. You have helped us accomplish that and we appreciate it.

[The joint statement of Secretary Orr and General Gabriel is as follows:]

JOINT PREPARED STATEMENT

HON. VERNE ORR, SECRETARY OF THE AIR FORCE
GEN. CHARLES GABRIEL, AIR FORCE CHIEF OF STAFF

EXECUTIVE SUMMARY

In the past two years, the United States has made a good start in strengthening the Air Force to meet the growing Soviet threat. With strong public and Congressional support, we have laid a firm foundation for a long term, measured program -- one that will help ensure peace and freedom for ourselves and our Allies. We need to continue this momentum.

For many years the Soviet Union has been outspending the United States for new weapons systems. The Soviets devote nearly 15 percent of their gross national product (GNP) to their military forces -- more than twice our effort. We are now seeing the results as new Soviet missiles, aircraft, ships and tanks take the field.

This Soviet arms buildup is shifting the balance of power. With its growing military strength, the Soviet Union is more confident in its ability to reach political objectives using force and intimidation. We need only observe the continuing Soviet brutality in Afghanistan, the political coercion of Poland, and the increasing subversion in Latin America, Africa, and Asia.

Since World War II the security and freedom of the United States and its Allies have depended on strong deterrent forces. For deterrence to be effective, we need both military capability and the resolve to use it, if necessary, to protect our vital interests.

Our military strength has to extend across the spectrum of the Soviet threat -- from special operations through conventional combat to strategic nuclear war. When we stand up for our convictions backed by powerful forces, a potential aggressor will be dissuaded -- as the Soviet Union was during the Cuban missile crisis. Strength does not invite war. Weakness does.

Priorities

Our programs are geared toward deterring war at any level. In doing this, we are getting the greatest strength from the dollars entrusted to us. The key to success in all these efforts is the men and women of the Air Force. Taking care of our people is a responsibility second to none. Additionally, to correct our most pressing deficiencies, we have set the following priorities:

- modernize the strategic nuclear forces;
- improve readiness and sustainability of the general purpose forces;
- increase airlift capacity;
- modernize and expand the tactical forces.

Strategic

The most urgent task is to modernize the strategic forces because we cannot risk the failure of nuclear deterrence. Accordingly, we are strengthening our nuclear forces to maintain a credible deterrent and a stable nuclear balance. We need an effective, survivable Triad of strategic forces -- bombers, intercontinental ballistic missiles, and submarine launched missiles. The Triad complicates Soviet planning for an attack on our strategic nuclear forces, prevents them from concentrating efforts to defeat a single element, provides maximum flexibility in the use of our forces, and hedges against catastrophic failure of any one leg.

Each element of the Triad has distinct advantages. Land based missiles have the best capability against hardened Soviet command centers and missile silos. They have great accuracy, prompt response, high alert rates, and low operating costs. Bombers are the most flexible element. They can be launched, redirected, recalled, and used again. They can be used a variety of ways, including attacking imprecisely located targets, conventional operations, and sea lane control. Missile carrying submarines contribute survivability and endurance. Taken as a whole, the Triad ensures that our forces can survive a Soviet first strike and retaliate with devastating force -- the very basis of deterrence.

In the past, we were confident that our strategic nuclear forces could survive and retaliate, but that is less certain today. Since 1974, the Soviets have developed and deployed new, more powerful and increasingly accurate strategic systems (three ICBMs, three ballistic missile submarines, two SLBMs, and a bomber). At the same time, we did not do all that was necessary to maintain the strategic balance. The Air Force has not fielded a new ICBM or bomber since the early 1970s. As a result, the Soviets have gained important advantages. Failure to strengthen our nuclear forces will cause us to face the danger of clear Soviet superiority.

We are continuing with the five-part strategic modernization program announced by the President in October of 1981. This program will redress the weaknesses created by the Soviet buildup; form the basis for meaningful arms reductions; and create a more secure, stable deterrent to Soviet aggression.

We are working hard to improve the survivability and performance of our strategic surveillance, warning, and command, control and communications systems. The first squadron of B-52s equipped with air launched cruise missiles is now operational. The B-1B and follow-on, advanced technology bomber programs are on schedule. The new, more accurate and more powerful Peacekeeper missile, survivably based, will ensure the retaliatory power of our ICBMs for many years. If we do not deploy the Peacekeeper we will undercut our position in the Strategic Arms Reductions Talks.

Readiness and Sustainability

Since the potential for any type of conflict is always present, our conventional forces have to be ready to fight at any time, and they need the staying power to win. A strong conventional capability is essential for deterrence and raises the nuclear threshold. In the late 1970s, while we were modernizing our general purpose forces, the measures required to support them -- training, maintenance, spares, and munitions -- lagged behind. War readiness declined, morale suffered, and training opportunities were lost.

During the last two years, we doubled the funding for readiness and sustainability and are now seeing the results. Our crews are flying more -- training more effectively -- and our stocks of munitions and spare parts are increasing. Moreover, the operational readiness of our new tactical fighters is improving and is markedly better than that of the aircraft they are replacing.

Force Projection

No matter how good our equipment, tactics, and training, our forces are of little value if we cannot get them to the battle promptly. Since we do not control the time and place of combat, we have to be able to move quickly to defend American interests anywhere in the world. We have had serious shortages in airlift for some time, and we are moving to reduce them. Modification of the current fleet and more spare parts have substantially increased airlift capacity. In the near term, we will buy 50 C-5Bs, add 44 KC-10As, and revitalize the Civil Reserve Air Fleet enhancement program. For the longer term, we will develop the C-17 to increase and modernize both intertheater and intratheater airlift. Together these actions should significantly reduce the airlift shortage.

Tactical Forces

We need to strike a balance between readiness and modernization of tactical forces. We not only have to be ready to fight with today's forces but we need to modernize to meet tomorrow's threat. Soviet forces are increasing not only in quantity but in quality as well. For example, their modern tactical fighters have increased range, can operate in adverse weather, and have greatly improved offensive capability.

We have the best fighters in the world today, but we need to improve their air-to-surface, night, and weather capabilities to meet the growing threat. Our emphasis will be on better avionics and munitions. We are committed to stable production of F-15s and F-16s to modernize and expand the tactical air force. With Congressional support, we intend to keep two fighter production lines open into the 1990s.

People

Ultimately, our capability as an Air Force depends on our people. Recent combat has shown again that well-trained, well-led, and well-motivated people win battles. When a pilot resigns, when a crew chief hangs up his or her uniform, years of irreplaceable experience are lost. The best equipment that money can buy will not carry the day without the right people.

In contrast to the 1970s when too many of our experienced people left us, we are now retaining experience and attracting high-quality recruits as well. As a result, our combat capability is improving. Unless we continue to take care of our people -- pay them fairly and provide the entitlements they have earned and deserve -- we will face serious problems in the future. We have to be competitive in the marketplace.

Space

While emphasizing our priorities, we face new challenges in space. US commercial and military dependence on space will grow, and we need to plan for it now. We are dependent on space for warning, communications, and command and control of our forces world-wide. In recognition of the increasing role and importance of space systems, we have taken two important steps. First, we have set out the doctrinal basis for developing, deploying and employing space systems. Second, we have established Space Command to consolidate management of Air Force space operations programs and to link research and development activities with military requirements and operations.

In the past, our space systems operated in a benign sanctuary, but this situation is changing. The Soviets have developed an operational anti-satellite weapon that threatens both civilian and military spacecraft. At a minimum we have to ensure our space systems can survive and operate in a wartime environment. We will protect our space systems and maintain access to space as a hedge against the Soviet drive to exploit space for military advantage.

Tactics, Training and Technology

The goal of all our programs is to assure deterrence. While numbers are important, we depend on high-quality people, realistic training, innovative tactics, and superior technology to give us the critical edge in combat over numerically superior forces. Aggressive, realistic training exercises, such as Red Flag, contribute greatly to the readiness of our forces and to the development of creative tactics.

The Air Force does not plan to fight alone. We exercise, train, and plan closely with our sister Services and our Allies. World-wide deployments and joint exercises are frequent. We are taking further steps to integrate air and land operations, to enhance Air Force contributions to maritime operations, and to develop complementary capabilities to get the job done in the best way possible.

The Air Force is a Total Force. The Air Reserve Forces -- the Air National Guard and the Air Force Reserve -- are fully integrated with the active forces in peacetime and in planning for wartime operations. Guard and Reserve fighters frequently fly 3,000 miles non-stop from the US to Europe to participate in exercises with our Allies. Guard and Reserve tankers routinely refuel B-52s. Half of our strategic airlift crews are Reservists. The Reserve forces are ready to respond quickly and effectively in crisis situations. We will continue to modernize Guard and Reserve equipment to increase the capabilities of the Total Force.

Besides superior tactics and training, we need to pay close attention to the other driving element -- technology. We have to stay on the frontiers of technology -- our ace in the hole -- and protect our advantages. Western technology can offset Soviet numerical superiority if we exploit it wisely and flexibly. At the same time, we cannot afford to let our technological advantages slip or be stolen away to be used by the Soviet Union. We cannot allow our combat capability to be threatened by Western technology in Soviet hands.

Installations and Management Initiatives

During the 80s we need to modernize our base facilities to bring them up to a level consistent with the needs of our modern weapon systems and the people who operate and support those systems. Major capital investment is needed to maintain, repair, and replace old facilities and to support construction for new missions. These investments are essential for readiness and sustainability.

To ensure we get the most from the funds entrusted to us, we are striving to manage our programs more efficiently and to guard against waste. Measures include increased use of multiyear contracting where feasible; accelerating weapons' acquisition times; steps to increase productivity and to control costs in defense-related industries; and vigorous efforts to prevent, detect, and eliminate fraud, waste, and abuse. These and other initiatives will help produce effective, combat-ready forces at reasonable cost.

FY 84 Budget

The Air Force FY 84 budget request for $92.9 billion identifies the funding needed to maintain the air power necessary to meet our global responsibilities. This amount is roughly two percent of our GNP and is less than our 20 year average.

Our nation can afford these improvements. We are recovering from a post-Korean War low in the proportion of national resources allocated to defense spending. That occurred in 1978 and 1979 when we committed only five percent of our GNP on defense. As recently as 1962, we devoted about nine percent in a peacetime year and did not consider that too much. The GNP percentage has increased slightly in recent years, and with continued, moderate growth, this nation will have the deterrent forces it needs.

MAINTAINING READINESS

Senator **Rudman**. Thank you very much, General Gabriel.

Senator Proxmire, I understand you do have an opening statement.

Senator **Proxmire**. That is all right. I will wait until we get to questions.

Senator **Rudman**. I think probably the best way to handle the questions today, Mr. Secretary, would be to ask them of both of you and then if General Spangrud wishes to amplify the answers with some detail, I leave it up to you to decide how you want to handle that.

Of course, looking at your budget, there is obviously a very heavy emphasis on procurement as the outlays in these years start to build up. It totals nearly $95 billion or 60 percent of the overall budget compared to 37 percent 10 years ago.

We understand the reasons for that, but the question is this, and General Gabriel alluded to it indirectly in his statement: if we have choices to make, and I expect we may have choices to make, are we going to be able to finance these investments across the board and at the same time have the readiness improvements that are absolutely vital to the forces that exist?

Secretary **Orr**. Let me open by saying it is our opinion that as the budget is built this year and our expected budget the coming year, the answer is very definitely yes. We are in a temporary heavy procurement area because for 20 years the two legs of the triad which fall on the Air Force have not been modernized and we are attempting to update. that.

We have had no new missile system put in since approximately the early seventies. Our B-52 bomber, as I am sure the committee knows, is between 25 and 30 years old. This is said with a smile, but it is a true statement that we have airmen today flying the same plane their grandfathers flew, which is an indication of the age of the plane.

So, we are in a temporary buildup of those two very expensive legs of the triad.

Insofar as procurement of fighter planes, it is very low—168 planes. It takes 225 at least to stabilize the age of our present fighter fleet, allowing for attrition, and we are not even doing that. So, in that area I don't think we can consider procurement to be heavy.

In a very brief answer to your question, we feel confident that we can maintain our readiness and sustainability.

BUDGET CUTS

Senator **Rudman**. General Gabriel, taking Secretary Orr's statement at face value, if in fact we are faced here in this committee with difficult choices, where do you want us to make them? In procurement, or operation and maintenance.

General **Gabriel**. Whatever cuts are made, they have to be balanced cuts obviously. I don't have, I would not want to speculate on where the cuts might be made, but I appreciate your interest in maintaining readiness. We all have that. That would be false economy to spend money to put the force structure out there and not support it to the maximum. We intend to do that.

At the same time, as I say, the budget we have before you, is the balanced budget which will bring in the procurement and fully support the weapon systems that we have now.

INTERNAL ACQUISITION STUDY

Senator **Rudman**. In the internal acquisition study which the Air Force accomplished, it is our understanding that one of the conclusions that it reached was that it well might be that major elimination of certain programs might be necessary to get the very balance that General Gabriel is talking about.

That was, I believe, a conclusion. What is your response to that and are you prepared, considering Budget Committee numbers and choices, to at least prioritize some of these systems?

Secretary **Orr**. One of the really great dangers of any study, whether it be the A-3 study or Spinney report, is an attempt to extrapolate into the future what happened in the past. I am amused to note if one were to extrapolate the first 120 days of the

German-Russian War, the extrapolation would clearly prove that the Germans overcame all of Russia and won the war.

When you try to extrapolate the last 20 or 30 years, as both the acquisition report and Spinney do, and then say the same thing is going to happen in the future you make three presumptions:

One, that defense spending in the next 30 years will be almost halved as part of the gross national product.

Second, you make the assumption that we will have in the next 20 years the kind of inflation we had in the last 20 where every year it went up. I don't think anyone can foretell the future, but currently that certainly is not a valid assumption.

Third, it makes the assumption we have learned nothing from history, and that one bothers me more than either of the other two assumptions because we are taking active steps to see that we have learned something from history.

I don't think it is a true extrapolation that because this happened in the last 20 years, it is absolutely certain to happen in the next 20.

SAR REPORTS

Senator RUDMAN. As we look at the SAR's which we now receive quarterly for the 50 major systems, what you are essentially saying is that you believe we will see more control and containment and growth of these major programs.

If, in fact, we are to see growth that was historically consistent in these major programs or in any number of subprograms, then, of course, you would agree we, of course, would have to take a very hard look at those programs, would you not, Mr. Secretary?

Secretary ORR. I have a figure that is not yet available to you so I will give it to you now. In the SAR reports for certain systems which you received 1 year ago there was a 10-percent growth.

You will be getting those SAR reports for the same system later in March when they are due and they will show a slight decrease.

Senator RUDMAN. That certainly is very good news. At any rate, I expect we will have a lot to talk about after this hearing and in the months to come about prioritizing, because it seems to me that the $8.3 billion production spoken of by Secretary Weinberger well may be subject to some revision.

Secretary ORR. May I interject one other thing? You specifically mentioned the reports you might get on the B-1. I am very pleased to tell you at the moment the B-1 program is on schedule or ahead of schedule and is on budget or under budget.

MILITARY PAY FREEZE

Senator RUDMAN. General Gabriel, I will address this specifically to you. You have already spoken on this publicly. I have asked the same question of the other Chiefs when they have been before the committee.

If, in fact, you had a choice to switch some funds from procurement to pay raises at some level rather than a freeze for your personnel, what would your choice be personally?

We understand you support the President. We are asking for your personal view.

General **Gabriel**. As you know, I am on record as having said that I would give up some programs for pay and make sure our troops are properly compensated. At the same time, right now, looking back at what has happened to us in the past, in October 1981, we reached comparability for the first time in our volunteer force. As the Secretary said, it really showed in terms of retention.

This year we have a 4-percent pay cap. A 4-percent pay cap this year when we don't have high inflation is not nearly so bad as the pay cap when we had a 4-percent cap and had 18 percent inflation. A pay freeze is not going to hurt nearly so much as it would have if you had that inflation.

So I think if the troops know that there is light at the end of the tunnel, and I am now giving you what the President's budget is today, the pay freeze shows the military is joining all Federal Government workers in this sacrifice for the 1 year; if we know that we can recoup anything in 1985, I think the troops will understand it. There will still be some impact, but I think it will be minimized.

MULTIYEAR PROCUREMENT PLANS

Senator **Rudman**. I would like to move on to your multiyear procurement plans.

One of the problems in multiyear is the possibility that some of the sources that were competitors will dry up. Then in outyears, with the competition no longer there as an incentive, the multiyear becomes harder to procure at reasonable prices.

Are you examining that particular issue as you are looking toward multiyear?

Secretary **Orr**. Mr. Chairman, let me say I agree fully with you, there are some advantages to multiyear. There are also some disadvantages you didn't state.

One of them is when you lock yourself into too many multiyear programs and Congress chooses in your wisdom to make cuts, you lose flexibility. We are watching the multiyear program very carefully.

We have a few multiyear programs in place which are successful. We have four that we are suggesting to the Congress in the coming year, the F-15, B-1, KC-135 programs involving reengining, and the communications nodal system known as TRI-TAC.

I am very cautious, not for the reasons you stated about competition, but simply because I don't want to see the Air Force get into a squeeze position where we lose flexibility. I think we are rapidly approaching the end of the number of multiyear contracts we expect to bring in.

Senator **Rudman**. The multiyear procurement for the KC-135 reengining, I was wondering why you were going to enter into that when you are not going to get deliveries until late this year? Is there any reason for doing it at this point?

Secretary **Orr**. We think we can contract out and interestingly enough, that is not for engines. That is for all the other factors involved, which are changes to the airframe itself, reskinning, and so forth. We think we can save some substantial money by entering into a multiyear procurement program. We think it is a stable program. It is producing very good results.

We have tried to set the production at what we call the knee of the curve, the place where we get the greatest economies. If we can multiyear at that point, we will do very well.

B-1B MULTIYEAR PROCUREMENT

Senator **RUDMAN**. I notice you are proposing multiyear procurement on the B-1B on the supplemental.

Is there some reason it was not suggested in the regular bill?

Secretary **ORR**. It is not certain at this point that we will have it in a supplemental. It is entirely possible that we will ask for some authority to do some advance procurement, but come over for the B-1 late in the year, not as part of a supplemental.

Senator **RUDMAN**. Is the multiyear procurement of the B-1B going to be essential to keep your original estimates within reason from what you presented to us?

Secretary **ORR**. Mr. Chairman, when we made the estimate of $20.5 billion for 100 planes we included in that estimate a saving of $800 million for multiyear.

Senator **RUDMAN**. You did?

Secretary **ORR**. Yes, we did.

Senator **RUDMAN**. At that time?

Secretary **ORR**. At that time. I think that is well known and on the record. That is not something we have come up with lately.

Senator **RUDMAN**. That may be, but I was not aware of that.

Senator Proxmire, since we may have to go to the floor frequently, why don't we informally follow the 10-minute rule and I will turn it over to you.

Senator **PROXMIRE**. Thank you, Mr. Chairman.

I would like to say to Secretary Orr that I can't remember a service Secretary who has responded to requests for information and assistance in as timely or as in complete a fashion as you have, sir. I am grateful.

Secretary **ORR**. Thank you, sir.

Senator **PROXMIRE**. On the occasions I wanted to talk to you, you have been most agreeable. I thank you for your cooperation.

Secretary **ORR**. I appreciate your remarks.

SOVIET DEFENSE GROWTH

Senator **PROXMIRE**. General, a recent article in the Boston Globe says there is a dispute in the intelligence community over the rate of growth in the Soviet Union's military sector. This article says the CIA's position now is that Soviet defense growth since 1979 has been substantially below 5 percent and actually might not be growing at all now. Others in the intelligence community disagree according to that article.

Is there any light that can be shed on this subject within the constraints of classification?

General **GABRIEL**. In general terms there is a briefing which if you haven't seen, you probably will from DIA, Mr. Hughes. If you have seen Mr. Hughes' briefing, that will explain very clearly what the Soviets are doing over the period that you talk about.

There could be some differences of opinion over how you cost the rubles into dollars, what they are spending. I didn't know within our intelligence community that there was any disagreement.

Senator **Proxmire**. You don't know of any disagreement between the DIA and CIA?

General **Gabriel**. No, I don't.

Senator **Proxmire**. The briefing that we have had publicly, of course, is that the Russians are increasing their defense spending at a much more rapid rate than 5 percent.

General **Gabriel**. Yes. What we have seen is a much higher rate than that over the years, 13 or 15 percent of GNP, I think we can say.

USE OF RADAR SYSTEMS IN AIRCRAFT

Senator **Proxmire**. I would like to ask some questions about the usefulness and consequences of equipping airplanes with radar systems. I understand this long, expanding practice has come under question by technical experts because radar emits strong signals that can be picked up by the enemy and used as a targeting aid.

Isn't it technically possible for the Soviet to design defense systems that home in on radar signals given off by the aircraft?

General **Gabriel**. It is possible, yes. I think the track record of the F-15 in the environment we face today has been pretty good, but it is technically possible to home in on radar.

Senator **Proxmire**. Isn't it likely because the Soviets might have such a defensive system that U.S. pilots will turn off their radars in combat situations so as not to be detected by the enemy?

General **Gabriel**. Not in today's environment unless it changes drastically, no. We still out-range the other side and I think we will continue to do that for some time—out-range them both in the lock-on of the radar as well as the missile.

Senator **Proxmire**. There are trade-offs. Radar is typically large and heavy. In order to accommodate the aircraft, it would have to be larger and heavier.

Isn't it correct that billions of dollars would be saved if radar is not required? I am not saying it should be in all the aircraft.

General **Gabriel**. I think radar is going to be required for the F-15's and F-16's. Certainly it is not required now for the A-10's. So some moneys could be saved.

At the same time if you take radar off of the F-15 and F-16, you are blotting out the capability for about 60 percent of the time at night, and in Europe another 20 percent in weather. You would have no capability other than day, clear air if you take away their radar.

INFRARED MISSILES

Senator **Proxmire**. I understand a high proportion of the targets that were destroyed by Israeli aircraft in Lebanon had infrared missiles.

Doesn't that suggest that Israelis prefer not to use radar with their weapons?

General **Gabriel**. I disagree with that. There were more killed with heat seekers, yes. The F-16's have heat seekers only. There are twice as many F-16's as F-15's. The F-15 with its AIM-7F got a credible number of kills. I can give you the breakout for the record of those 85 or so kills they got.

[The information follows:]

BREAKOUT OF TARGETS DESTROYED

Answer. [Deleted.]

Care must be taken not to use the one campaign in the Bakaa Valley as a model for future USAF force structure plans. It was a constrained low altitude, high-speed fighter vs fighter battle conducted in day clear weather conditions and based on plans that had been long in development. We must be expected to fight under a wide variety of combat conditions—for example, in Central Europe our air superiority fighter could be expected to meet massed formations of fighters, bombers, and jammers penetrating at low altitude, between cloud layers, in weather, or at night. Radar and radar missiles are essential to meet this threat.

RADAR MISSILES

General **GABRIEL**. It is not so much one missile against another. It is the environment. You need both of them. You need the IR to give the standoff. You need the radar to give the longer standoff. You certainly need the IR for the close combat. So they are a good combination.

Senator **PROXMIRE**. You know, I read that Spinney article in Time Magazine. I was not at any briefing. I have been appalled for years, I know you are and everybody else is, at the terrific goldplating. We put more and more and more here.

I am afraid my question is leading me down the path when you say you will want to put both in the aircraft so that you have both radar and infrared and you have higher cost, greater weight, and you will have the other trade-offs.

General **GABRIEL**. The capability is there now. The greatest increase in our capability on our fighter aircraft will be when we get the radar missiles. We have the radar in the airplane now. All we need to do is add the missile and we are building the missile now.

I don't see the added cost you are referring to and this is not goldplating. If we don't maintain our technological advantage over the other side, the way they outnumber us, there is no way we will be able to survive.

Senator **PROXMIRE**. Isn't it true during the Vietnam war the Navy's A-6 aircraft and F-111's tried to use radar bombing and it did not work?

General **GABRIEL**. That is not true. The F-111 is the only airplane that can get in at night at low level. The North Vietnamese called that "whispering death." They were afraid of it.

The Soviets got the signal very clearly. The F-111 is one hell of a weapon system.

Senator **PROXMIRE**. If the Soviets have antiradar defenses and the B-1 and Stealth are equipped with radar, won't they be easy targets and sitting ducks for the enemy?

General **GABRIEL**. No. We have ways, as you know, to counter that. The B-1 will see those threats before the threat sees the B-1. The B-1 has ECM. The B-1 has low radar signature. With the knowledge ahead of time, the B-1 can either kill those threats or avoid them.

RADAR STUDIES AND ANALYSES

Senator **Proxmire**. Can you tell us of any studies that have been done within the Air Force or elsewhere in the Defense Department that explore the questions with respect to radar or concerning the usefulness or consequences of employing radar in aircraft and experience with it during combat situations?

General **Gabriel**. There are a number of studies and analyses of course. I can provide for the record some of them. I don't have them off the top of my head.

Senator **Proxmire**. I understand that much of this, of course, is classified. Maybe we can get a briefing on that under classified conditions.

General **Gabriel**. Very good.

[The information follows:]

Studies Concerning Radar in Aircraft

Numerous studies have been conducted which examine the benefits and vulnerabilities derived from on-board fighter radars. Many of these are very specialized, addressing unique problems; therefore, we have provided a selected bibliography of those studies which apply most directly to your area of interest.

Radar has played an increasingly important role in air combat since first introduced in the Battle of Britain. It increases the effectiveness, flexibility, and survivability of aircrews by providing long-range target acquisition, situation awareness, and rapid and reliable weapon employment. Our confidence in the cost-effective contribution of radar to combat aircraft is derived from years of experience in training and combat and from a large number of studies. Most recently our confidence has been supported by the performance of U.S.-made radars in the conflict in Lebanon.

BIBLIOGRAPHY

1. ACEVAL Follow-on Analysis.
2. Air-Air Antiradiation Missile Countermeasures Study (Counter-Arm).
3. Air-Air Encounters in Southeast-Asia.
4. Air Threat to Central Europe, 1980–1990 and Beyond.
5. AMRAAM Analysis (Saber-Challenge-Hotel).
6. Combat-Sage PACAF Weapon System Evaluation Program—WSEP fiscal year 1978.
7. Comparative Evaluation of Beyond Visual Range Air-Air Capability.
8. Effectiveness of Medium-Range Air-Air Missiles in a Countermeasures Environment.
9. F–111 Radar Bombing Accuracy.
10. F–15/F–16 Radar Missile Options (Saber-Jet-Quebec).
11. Quality Versus Quantity in Tactical Fighter Forces.

FIVE-YEAR PLAN IN DEFENSE SAVINGS

Senator **Proxmire**. Mr. Secretary, today three former Cabinet officers and a former Chief of Naval Operations submitted a 5-year plan for saving $136 billion in the national defense costs to the chairman of the House and Senate Budget Committees, Cyrus Vance, McGeorge Bundy, Robert McNamara, and Admiral Zumwalt.

Among other items, they say the Air Force plans to refurbish antibomber defense, building 12 more airborne warning systems, transferring earlier models of the F–15 to the Continental Air Defense in fiscal year 1984 alone despite the weakness of the long-range Soviet bomber force, and inability to intercept missiles, they say it is unwarranted.

What is your reaction?

Secretary **Orr**. First, I would like to give you my reaction to the total picture specifically as put forth by Secretary McNamara. I find it a little surprising when the Secretary was head of Defense we were spending upward of 9 percent of our gross national product on defense and defense at that time had 45 percent of the Federal budget.

Now we are spending under 6 or approximately under 7, approximately 6 percent of our gross national product on defense and the defense budget is 28 percent of the Federal budget. He is now saying we should make cuts. I fail to understand what he was justifying when he came before this committee when it was 9 percent of GNP and 45 percent of the budget.

Senator **Proxmire**. Secretary McNamara did impress the Congress with his fantastic knowledge of numbers. He sat here for 7 hours answering questions without any assistance from anybody or any reference to notes. I asked him one time how he did it.

He said, "That is because I do my own work." He put the budget together himself working long, long hours, day after day after day. He is not the kind of fellow you dismiss. He certainly is not insincere. I am sure you agree with that.

Secretary **Orr**. I am not dismissing that. I am not claiming he is insincere. I find it incomprehensible that he supported a budget of 9 percent of gross national product, but now can't support a budget of 7 percent and makes cuts in it.

He supported a budget of 45 percent of the Federal budget and now finds 28 percent is too high.

Senator **Proxmire**. I don't find that convincing at all. I don't understand why because you needed 45 percent of the Federal budget in defense in 1962 you should have a 45 percent of any other percentage of the Federal budget at this time.

The situation obviously has changed so dramatically in the last 20 years. The Federal budget has grown enormously as has the gross national product.

SOVIET THREAT

Secretary **Orr**. And as has the threat.

Senator **Proxmire**. It is a different kind of threat.

Secretary **Orr**. You were just saying maybe there is a split among intelligence people about how much the Soviets have been spending, but there is no disagreement that they have been spending a tremendous amount of money.

Senator **Proxmire**. Yes, but the threat is different in this sense. I think Secretary McNamara has indicated time and again, and I am indicating an area beyond your immediate responsibility, but as far as the strategic situation is concerned, the fantastic, colossal, super abundance of destructive capability on both sides in strategic arms, nuclear arms, is so immense, it is different in degree certainly, different in kind perhaps than it was 20 years ago, in the accuracy, reliability, destructive capability, et cetera.

Secretary **Orr**. It wasn't too long after Mr. McNamara was in, according to the Time Magazine you quoted, we were buying 6,300 fighters a year.

Senator Proxmire. As you know, we were turning out before that 10,000 fighters a year, but we were turning them out because they cost $150,000 apiece instead of $30 million apiece. That is the goldplating situation.

AWACS

Secretary Orr. Let me go back to your question on the AWACS. We are indeed asking for increased production of AWACS. I don't know of a warning plane that is more effective. I think you are aware that it is almost smilingly said we sent the AWACS instead of the Marines when there was difficulty in the Sudan area and Egypt and with Quaddafi.

The first forces we sent down there to be of assistance were the AWACS planes. We have them on permanent TDY, temporary duty, down in that area on loan. Those countries are thinking of buying them. France is thinking of buying them. The Navy has asked for increased numbers of AWACS from us to help guard the United Kingdom-Iceland Gap.

It is a tremendously valuable plane. We think it would be a good plane for the continental defense of the United States. We have not successfully had the kind of money that we would like to renew the DEW line.

BALLISTIC MISSILE PROGRAM

Senator Proxmire. They put this in the context of the weakness of the long-range Soviet bomber force and inability to intercept missiles.

The McNamara group also argued for extensive research on land-based single warheads, ballistic missile systems in lieu of the MX. I have talked to a number of people lately who seemed to feel that that might make sense.

Do you share that enthusiasm for the small missile program?

Secretary Orr. No, but I am not willing to write it off. The President's Commission is looking at all sources, and reports in the newspaper indicate the small missile is one of them.

I think you have two problems going to a small missile. It does not solve the basing problem. As a matter of fact, it could exacerbate it if you went to several hundred or several thousand small missiles. Where are you going to put them?

Second, I think you run into some problems with our unwritten agreement to abide by SALT II which the President has indicated which has a limit on the numbers of launchers.

Senator Proxmire. We might be able to have a trade-off in the negotiation on that.

My time is up.

ROLE OF FB-111

Senator Rudman. I want to go to some specific questions on some specific systems for you, Secretary, or for General Gabriel. I want to explore some of the options that you appear to have followed in this budget and I am curious as to why you chose them over some alternatives.

I want to talk first about your problem with conventional deep interdiction in conjunction with your NATO mission. You decided evidently to accomplish that by very extensive and expensive modifications of your F-15's and your F-16's designated "E" on both, 15-E and 16-E, new wing modifications, range, fuel, and so forth.

I am wondering, with the tactical nuclear strike capability of the Pershing II's and the GLCM's, why you would not consider the FB-111 for that mission? It is, as you have said, one hell of a weapons system.

I had a chance, as you know, to visit your squadrons in Europe and talk to the FB-111 pilots, look at their briefings and their missions. That is a system which is enormously capable, very reliably, proven. We have them in place, we have the support systems in place. We have the pilots trained and we could save, according to our committee's calculations, about $4 billion and deploy the system a number of years sooner.

With all of those pluses, will you tell me why we have chosen to go the E route with the 15's and 16's?

General **Gabriel**. That is a compelling case. I agree with everything you say about the FB-111. We don't have very many of them, as you know. Right now they are in the Strategic Air Command and have a different mission than the theater mission.

Senator **Proxmire**. It is the same Air Force.

General **Gabriel**. It is the same Air Force. Let me say that we intend to put them in that role. It is my feeling when the B-1 comes in we are going to be able to shift those aircraft to the tactical role. There is no other aircraft, we could not build another airplane to do that job today.

The F-111 is far superior. We could not afford to do it, I don't think.

You visited Lakenheath. We have seven squadrons of them in the United Kingdom. The F-111 is the only airplane we have that can get low at night and fast and find the target and kill it. When we do, if we do get the FB's with the improvement we have now, and if we put them in, we will have 300 F-111's total. That will give us a good capability for a period of time.

When you consider attrition over the years, eight or nine a year, they are going to last 30 years or more. Somewhere along the way you have to have a follow-on to that capability. That is what we are looking at for the improvements in the 15's and 16's.

We have made no decisions about whether or not to do both or one or none. That is an evaluation that is ongoing. For long-range interdiction, the F-111's over there today in the United Kingdom are the only ones that can reach a lot of targets with conventional weapons.

The ground-launched cruise missile and Pershing will be nuclear. They will take the load off the F-111's that are pulling right now a heavy load in our nuclear role. The F-111's will be able to shift more to the conventional role and that will help a lot.

But we are trying to again add to that capability, long-range interdiction at night, low level. We have not decided whether we will do either the F-15E or the F-16E, as I say. There are other options we could find. We do need in the Air Force to have a capability to get to the target below the weather at night and we will be able to do that with FLIR and LANTIRN which we are looking at as well.

But to do it, we think we will have to do a little bit more than just add the LANTIRN because it will be very dangerous down there without automatic terrain following.

FB-111 UNSOLICITED PROPOSAL

Senator **RUDMAN**. Am I correct that there was an unsolicited proposal to essentially build a number of FB-111's that would appear to be an attractive price because of the fact that the technology and the engineering is essentially written off on the original buy?

General **GABRIEL**. To crank up the line again?

Senator **RUDMAN**. That is correct.

General **GABRIEL**. I have not seen that proposal, but I would not be surprised if there is one out there.

Senator **RUDMAN**. Would that not be worth examining in terms of looking at the whole mix we are talking about? We are looking at the B-1, advanced technology, Stealth, and GLCM's. We have a new Presidential directive on the ALCM's. We are talking about deploying Pershing II's. There is a great overlap of missions I understand that. I have been briefed on that.

Is it not possible that by purchasing FB-111's at a reasonable price, if one were achievable, that we might be able, because of its amazing ability to carry out a number of missions, to save some money in the outlays in future years.

General **GABRIEL**. If it could be cost effective, obviously yes, that would be a reasonable thing to do. What we have now in the Air Force, are two solid fighter programs in procurement, the F-15 and F-16. The F-16 is only a multiyear and it is at a very good stable level, 120, 120, going to 180, which will give us the most efficient production or approaching it. For the F-15, we are just barely managing to keep the line warm.

We have been able to get a multiyear. We are trying to ramp that up a little bit. It would seem to us that with those aircraft with the capability they have today, modern technology, it would be a logical approach to take those platforms and add some avionics and give them that capability of operating below weather and at night.

Senator **RUDMAN**. I think if you are looking at it on that basis, I would draw the same conclusion. I am just saying that in terms of prioritizing, trying to come out with operational readiness, it may take more flexibility.

I wish you would look at that proposal. Maybe it is obviously too costly, but that is a weapon system that the Air Force I know is very pleased with in terms of the mission it carries. I watched those missions and it is very effective.

The other point, of course, is that you won't have the result of comparison flight tests of the 15 and 16 derivatives until July at the earliest. That raises a question as to whether or not we really ought to lay out that money at this point for continuing development in initial procurement.

I think you are requesting $126 million, which is a relatively small amount in this budget, but we are trying to find any savings we can get.

General **Gabriel**. I can understand and appreciate that. We will give the briefing this summer when we get the test results.

Senator **Rudman**. Let me move on to another system, Mr. Secretary or General.

FUNDING MAVERICK

Last year on the floor of the Senate I found myself in a position, of defending an attempt to eliminate funding for the Marverick and the Maverick—I see the chairman has arrived so I will finish this question and swap seats—I wanted to simply say that we defended that and I personally was directed by the Chairman to defend the attempt to eliminate that funding.

There were a lot of problems with the new Maverick. The Air Force said there were a number of things being done that appeared to be solving the problem, the whole issue of anti-armor which goes from the Army's ill-fated Viper procurement all the way through some other systems.

Are you ready now to tell us that we ought to continue funding Mavericks and that your latest testing indicates the myriad of problems which existed, are on the verge of being solved?

I would like you to talk about that if you could.

General **Gabriel**. Yes; we are ready to tell you that. We have 20 out of 26 hits with the IIR Maverick. Overall the basic TV Maverick has had at Red Flag, at Nellis and all other places 85-percent success. The Israelis had 40 out of 49 hits in the 1973 war.

We have found problems in the system. We have fixed it. We are satisfied. We find we are ready to fire for effect.

DIFFICULTY IN IDENTIFYING TARGETS

Senator **Rudman**. Have you solved the multipass targeting problems you have had where the pilots of the Maverick-equipped aircraft would have difficulty in identifying targets on their first pass over the battle area?

General **Gabriel**. That was mentioned and some said we couldn't tell whether they were our tanks or the other side's. That is not a very accurate statement in the sense that you are going to be in an area where any tanks you find, you are going to shoot at.

Senator **Rudman**. That charge is a silly one. It was made on the floor. Obviously when tanks are in that close proximity to each other you will not be using Mavericks. They will be using systems against each other.

This is a question of whether or not they are going to identify them in the proper area on the pass over that area. They were having targeting problems against the armor, itself.

Has that problem been solved?

General **Gabriel**. Yes; it has been solved to our satisfaction that you will be able to tell an armored vehicle and shoot.

Senator **Rudman**. I would like you to supply me with the results of late testing which I believe was done at a time contemporaneous with the time that we were having this debate on the floor. So what we said was let the tests get done and look at it this year.

[The information follows:]

Results of Late Testing

Infrared (IR) Maverick Initial Operational Test and Evaluation (IOT&E) was conducted from February 1981 through August 1982 to assess operational effectiveness and suitability. The IR Maverick was operationally effective in varied scenarios and conditions. The capability to launch the weapon effectively [deleted] was also demonstrated.

Operational suitability testing evaluated reliability and maintainability. Three reliability categories were tested: incoming reliability, logistics reliability, and mission hardware reliability. All areas of reliability were deficient when measured against the desired mature system values. During maintainability testing all maintenance action times were within criteria and rated satisfactory.

To correct the deficiencies found during the reliability evaluations, design corrections were incorporated in the IR Maverick. Additional testing was conducted in December 1982 and January 1983. Significant improvement was shown in all areas of reliability. The reliability now exceeds mature system threshold requirements in all areas previously deficient.

Pilots were able to employ IR Maverick from longer range than the TV Maverick, thereby increasing survivability.

Senator **Rudman**. Mr. Chairman, would you like your chair back?

Senator **Stevens**. You stay right there.

I want to apologize. I have a bill on the floor and the manager of that bill is a chairman from another committee. I was not able to be here. I thank Senator Rudman.

I do have a couple of questions, Mr. Secretary, and then I am going to have to go back right away.

REPROGRAMING REQUESTED BY COMMITTEE

In the conference report last year we worked out sort of a package that dealt with the C–17 and the A–10 and some other items and we requested a reprograming from the Department on that series of items.

Are you familiar with that?

Secretary **Orr**. Yes, I am.

Senator **Stevens**. Where is that now?

Secretary **Orr**. Mr. Chairman, that is in the Department of Defense right now. I would say in all honesty it just went down recently. I don't want to criticize them for not acting.

Let me tell you of our dilemma. The one thing neither you nor we wants is to have funding of roughly $30 million in 1982, $60 million in 1983, and back to $27 or $30 million in 1984.

Senator **Stevens**. You are talking about C–17 now?

Secretary **Orr**. Yes.

Senator **Stevens**. I want to get to the A–10's.

Secretary **Orr**. Let me discuss the C–17 first. Our desire is to avoid that because that is rough on contractors and nonsensical. There are a number of ways we can avoid it.

Senator **Stevens**. This is R&D?

Secretary **Orr**. For R&D.

Senator **Stevens**. This is 2-year money?

Secretary **Orr**. If it is 2-year money, we are out of the woods.

Senator **Stevens**. It already is.

Secretary **Orr**. There has been an effort, at least in some parts of Congress to do it in 1 year, one time.

Senator **Stevens**. We wanted to accelerate to get the R&D done so that we would know whether we are going to go into procurement on the C-17. The difficulty is that the budget for 1984 has $27 million.

Secretary **Orr**. If it is 2-year money, that gives us a ramp up. We split half of the extra in 1983. That is what I was trying to speak of.

Senator **Stevens**. You are going to split the 60 into 2?

Secretary **Orr**. Yes. Then we would have an even ramp up.

Senator **Stevens**. In 1981 you had $35 million. In 1982 Congress made a mistake and didn't give you any money. In 1981 you had $35 million. In 1982 there was no money. In 1983 we tried to pick it back up and put it at $60 million to make up for what was lost in 1982. Now we go to $27 million for 1983.

Secretary **Orr**. 1984.

STRETCHOUT OF R&D MONEYS

Senator **Stevens**. I understand the problem is you are stretching it out.

Why do you want to stretch out the R&D? We would like to get it done.

Secretary **Orr**. We are not trying to stretch it out. We are trying to make it ramp evenly. If we can spend the R&D money, the extra millions given to us for 2 years, we will ramp it up and we are working toward 1985 for a very substantial increase.

Senator **Stevens**. The difficulty is when we got into the argument over the C-17 we were not able to put it into any kind of competition with other aircraft procurement because the R&D on that has not been finished.

When will it be finished under the current budget request?

General **Spangrud**. The $60 million that was added will not accelerate the IOC of the C-17. We would have to have additional money over and above the $60 million that was added.

Senator **Stevens**. For 1983? We were told that was all that could be used in 1983.

General **Spangrud**. Yes, sir. There was $200 million that was offered. The Air Force made a quick computation and said 60 was probably all they could use. We put the 1984 budget together and 1984 did not get it fixed. We had a ramp up from $60 to $180 million. We tried at the last minute. We could not work that because we were in a cutting mode.

Senator **Stevens**. I think I am dealing with a feather pillow. We had $200 million at one time and came down to $60 million because you said that is all you could use.

General **Spangrud**. Exactly.

Senator **Stevens**. In order to accelerate the R&D? You had zero the year before. You put it back. Now we get a request for $27 million and we are told there is reprograming to come on with the $60 million.

General **Spangrud**. Yes, at the direction of Congress. We were directed to come back with $60 million for authorization.

Senator STEVENS. In order to use it, not to eliminate it.

Secretary ORR. We are not trying to eliminate it.

Senator STEVENS. Are you going to stretch it out?

General SPANGRUD. What we are trying to do right now is take $60 million, combine it with $27 million and use it as 2-year money and make a ramp up.

Senator STEVENS. When will you start full-scale development on the C-17 according to this schedule if this reprograming is approved?

General SPANGRUD. Fiscal year 1985.

A-10 REPROGRAMING

Senator STEVENS. What about the A-10's? The A-10's were not in the 1983 budget. We argued about it and we got them back in finally.

Does the Air Force no longer want the A-10?

Secretary ORR. The A-10 reprograming is done in Defense. It has been down there for some time.

Senator STEVENS. You still want them?

Secretary ORR. No. I have to say we will accept them, but they are not a high priority with us.

Senator STEVENS. They are in the budget for 1983. They were budgeted. All we did was provide the money that was budgeted. Suddenly we find changes in direction here as far as the A-10. We put that money back in. It was budgeted.

In addition to that, there was a letter from the President, as I recall.

Secretary ORR. They were not authorized. It was a case of money appropriated, but not authorized.

Senator STEVENS. That is correct.

Secretary ORR. Our reprograming to get them authorized is in the hands of Defense right now, which is required by Congress.

Senator STEVENS. When this subcommittee was in Europe the commanders in the field wanted more A-10's. I just got back from Edwards Air Force Base. The people tell us that the Army likes to have them, wants the Air Force to have them.

Is the Air Force not going to acquire any more A-10's, as I understand it, after this package?

Secretary ORR. Years ago when we bought A-10's we set a given number to buy and we have bought near to that number. It is not that we don't like the A-10. We bought the number that we set out to buy. It might be slightly less, but basically we finished the buy, Senator.

STRETCHING OUT 5-YEAR ACQUISITION PROGRAM

Senator STEVENS. Mr. Secretary, in the current budget scenario we have a 5-year program for acquisition and it adds up to $1,000,600 million.

You are familiar with that?

Secretary ORR. Yes, I am.

Senator STEVENS. Did the Air Force ever do any studies to how that 5-year period might be stretched out to 6 or 7?

Secretary **Orr**. I suspect we have looked at it. What happens if we do that in many cases, Senator, is that we get into exactly the situation Mr. Spinney was talking about in his presentation recently. Every stretchout, unless a program is canceled, only stretches the number of units you buy in the future and buys fewer each year.

Frankly, we have been trying very hard to do the opposite in order to have economic production rates.

Senator **Stevens**. Mr. Spinney's problem is that he gets on the front page of Time as a budget cutter and I never could quite figure that out. I read the article and I looked at the statement, but I can't quite understand. He wants us to increase spending now so that we it will be decreased in the future years. That is understandable.

Maybe he doesn't look at the deficit side of the budget now. The real problems are that are looking at the deficit side now. If there has been a schedule worked out for stretching out that 5-year period to 6 and 7, I would like this committee to be able to take a look at that.

Secretary **Orr**. If there is a formal study, you will be furnished it for the record.

Senator **Stevens**. Thank you.

[The information follows:]

STUDIES OF ACQUISITION STRETCHOUT

We know of no formal study that has been made regarding this subject.

MULTIYEAR PROCUREMENT OF F–100 ENGINE

Senator **Stevens**. Senator Weicker.

Senator **Weicker**. I have some questions, but I wonder how much I will be able to get in before we vote. In any event, I want to be sure they are presented for response for the record.

Recently, Mr. Secretary, F–100 engine multiyear procurement was turned down by the Air Force.

What was the rationale used by the Air Force to reject multiyear procurement?

Secretary **Orr**. We are going out to two contractors for bids. The request for proposal goes out this month. Bids are due back in June. A decision will be made in December.

One of the contractors came in before we had even approached both contractors except in preliminary fashion and said, "Here is our proposal, take it or leave it." We don't believe in doing business that way. We will accept it when we have seen the other man's. It may not be the best proposal.

Senator **Weicker**. In other words, the concept of the multiyear proposal was rejected?

Secretary **Orr**. To the contrary, I think we didn't get this initial proposal until we instituted competition. I think competition has been a great thing here. I would not be at all surprised if when both bids are in, both bids may be better than the initial presentation.

THRUST NOT AN ISSUE

Senator **Weicker**. The last question, and the others will be submitted for the record, I saw a letter from Pratt & Whitney to its employees. The letter states in part, "The Air Force has assured us repeatedly the result of the competition is not preordained. Either contractor can win 100 percent of the requirements."

The letter continues, "In the meantime, the Air Force assured the thrust will not be an issue in the current competition for 615A through C models. We accept that assurance."

Does the Air Force concur with those statements?

Secretary **Orr**. Very definitely. Let me say there has been considerable discussion of thrust. When you equate thrust to weight, the two engines at the present time are about the same. The one with the greater thrust has greater weight. On a per pound basis they are approximately equal.

Senator **Weicker**. We do have to go for a vote. I have further questions I want to submit for the record.

Secretary **Orr**. We will be happy to answer them, sir.

Senator **Rudman**. I will not put the subcommittee in recess. Senator Proxmire has other questions. He is on his way back. He will proceed with his questioning when he returns.

[Recess.]

ALCM PROGRAM

Senator **Proxmire**. General Gabriel, recent press reports suggest the Air Force knew last year it was going to change directions in the air-launched cruise missile program by canceling current generation procurement and moving ahead with an advanced generation weapon. The article suggests the Air Force went ahead with the current program as a deception to the Soviet Union without informing Congress as a whole.

Would you please comment on that situation?

General **Gabriel**. Yes. We are planning to build a follow on missile to the ALCM B air-launched cruise missile. Some of this I can't go into in great detail obviously. It is a matter of transition. There is nothing wrong with the ALCM B. It is a good missile.

The other missile we hope will be better and possibly more cost effective. It is a matter of how you manage that transition from one year to the next. In my mind and in the Secretary's mind we weren't planning to deceive the Soviets or anybody else in the way that was handled.

Secretary **Orr**. Could I amplify?

Both General Gabriel and I resent the implication in that particular article that we lied to the Soviets or more particularly to this Congress.

Senator **Proxmire**. That was the Washington Post article.

Secretary **Orr**. In the late fall, rather, late summer or early fall, the proposition was advanced to the two of us that it might be timely to go to a new cruise missile. In preparing for this budget we zeroed the present production of the cruise missile.

There has never been a slightest attempt to deceive anyone. It is there in the budget to be seen. The only thing seen in the change is that preliminary information coming in on that new cruise missile indicates it may be more expensive, or not as cost effective as we thought.

We are rethinking whether we should go on 1 or 2 more years with the present cruise missile. There has not been the slightest element of deceit. I think the article goes so far as to say that we lied.

Senator **Proxmire**. The last paragraph in that article says:

> The Air Force has answers for all these questions if anyone in Congress bothers to ask them. One can hope this time around the Air Force will answer the questions directly without playing the dangerous game of using official documents to deceive the American public in the hopes of fooling the Kremlin. The Soviets probably plan for the worst anyhow in building their defenses.

Secretary **Orr**. I am questioning his accuracy in stating that we tried to deceive someone. It is a change in the missile. It is set out in the budget. It came to us last fall, and when the budget for the current year was prepared almost 14 or 15 months ago. This was not an option that was presented to us. It was not even considered.

VULNERABILITY OF LAND-BASED STRATEGIC COMMAND CENTERS

Senator **Proxmire**. General, the Deputy Under Secretary for Defense for Research and Engineering said our current command and control facilities could not withstand Soviet attack due to the increase in accuracy of the Soviet ICBM's.

Isn't it true our land-based strategic command centers are now vulnerable to attack and if so, what do you plan to do about it?

General **Gabriel**. They have been vulnerable for a number of years. It is a matter of degree. There are degrees of hardness and he is accurate when he says the Soviet ICBM's accuracy has improved a great deal. We are continuing our hardening process, especially for those communications elements that have to do with strategic nuclear offense, all the way down to the wing command post level.

So, we are putting a bit of money in this budget to do just that, both the physical hardness as well as some EMP hardening.

SPINNEY REPORT

Senator **Proxmire**. You heard the so-called Spinney briefing?

General **Gabriel**. I have not heard it personally. I read a lot about it.

Senator **Proxmire**. Would you agree with the consluсion that the Defense Department, including Air Force is overestimating the cost savings that accure from the learning principle, have done this consistently?

General **Gabriel**. There is a lot of truth in some of the things he says and some exaggeration. The Secretary might be able to comment on this a little better than I.

We have not had as good a cost forecast in the past as we have today and a good bit of what he is writing about, of course, is history.

Senator **Proxmire**. Some of the increase that I understood the Secretary addressed himself to, and he has a good point, some of it is a difference in inflation. If we don't have the kind of terrible inflation we had in the 1970's, obviously your estimates are likely to be more accurate. On the other hand, the estimates now on inflation are, in my judgment, pretty optimistic.

There are all kinds of reasons why we might have serious inflation, including collosal deficits we might have to face for some years to come. In any event, the misjudgment was not primarily a matter of judging inflation properly.

Again, my staff and I have gone over these estimates to correct them fully for inflation and found there was still a big overrun, no matter how you allowed for inflation. There are mistakes there.

General **Spangrud**. Just talking to a learning curve and the Spinney report, going back to the 1970's when we had the period of the learning curve flattening, if you look at the systems we bought during that period, you have to go back to the C–141 back in the 1960's before you find an Air Force system that we bought on the schedule we planned.

This is the greatest contributor to the learning curves flattening and that is that we never bought any of those aircraft that we planned to on the planned schedule. That is the single biggest factor. I am talking about cost in real terms. Inflation obviously was a factor and may have been one of the factors that caused us to have to stretch.

There is no simple answer to it. I have had the Spinney briefing. It is just a factual plotting of procurement unit cost. He didn't do it the way I think a cost estimator would have done it, which is to take out the supporting equipment and the spares in order to deal with the fly-away cost which is where the learning curve is. That is beside the point. He showed that we didn't achieve the learning in any system that we thought we would principally because of the instability in funding and therefore stretch out of the program.

REASONS FOR COST OVERRUNS

Senator **Proxmire**. Were there not also design changes? We seem to be constantly modifying and changing. It drives the procurement people nuts in that way plus the fact an awful lot of our contracts are cost-plus contracts. You don't have the discipline you have in the private sector where if the cost goes up, the producer has to eat those costs out of profit or take a loss on it or go to court and be sued.

Secretary **Orr**. I don't think any of us argue with Mr. Spinney pointing out what has happened in the past. My own report, A^3 acquisition report, also tells the story of continual cost overruns. General Spangrud has indicated part of the reasons. There are many others.

One you mentioned is countless myriad changing of small items on production such as if you build a house and you get a firm fixed price and then you say, "I want two more electrical outlets in the living room," your firm fixed price is gone. You are going to pay for the addition.

In a program like the B–1 any change in that particular weapon system which would cost more money must not only receive the Chief's approval and my approval, but Secretary Weinberger's approval. We have tried in that particular weapon system to tighten the screws way down. That is an extreme example.

All through the Air Force we are trying to get rid of the constant changing in the specs which allows the manufacturer a large loophole to drive in if he has estimated his price too low. We don't use cost plus. We use firm fixed price plus incentive. The incentive is that if you go under, you share part of it. If you go over, you share part of the loss.

Mr. Spinney does point out some of our problems that we have been working on.

VIOLATION OF SALT II TERMS

Senator **Proxmire**. Do you believe that the U.S.S.R. violated the SALT II terms on the new light ICBM recent test activity in the U.S.S.R.?

General **Gabriel**. The two missiles that apparently have been tested and whether or not they have violated the SALT II?

Senator **Proxmire**. Yes.

General **Gabriel**. That is debatable. We have looked at both sides of that. It would have to be thrashed out I think in the committee that we have in Geneva that looks into that. In my opinion, I think they probably are OK in testing two up to a certain limit, but when they start to produce and deploy, then they have to go to one.

Senator **Proxmire**. Is there an advantage to the Soviets?

General **Gabriel**. We are looking at that now—the JCS are. The Soviets are allowed within certain growth limits of another missile to go ahead and test and that is what we are looking at now, based on the intelligence we have. If they are basically within the limit on one of those, they are not in violation.

Senator **Proxmire**. Wouldn't both the United States and the Soviet Union increase their relative security if the SALT II loophole allowing for one new light ICBM be eliminated and both sides could be well served by that?

General **Gabriel**. If we have a clear agreement now that we only have one light?

Senator **Proxmire**. If we knocked out the one light?

General **Gabriel**. I would not agree with that because what they have is a much better missile than we have today, three of them. They are more accurate, they are harder. They are much more effective than what we have. They have about 2½ times the warheads we have in their land-based ICBM's.

Seventy-five percent of their warheads are in ICBM's and they are better than ours.

PERCENTAGE OF GNP INVOLVED IN MILITARY SPENDING

Senator **Proxmire**. Let me go back, Mr. Secretary, for a minute to that McNamara situation. While he was Secretary of Defense, of course he had a very, very costly war going on in Vietnam. That explains maybe in part the reason why we had such a high proportion of the gross national product, 9 percent as you said, and a high proportion of the Federal budget, 45 percent, involved in military spending.

Secretary **Orr**. Without specifically going to Mr. McNamara's years, may I say that in the proportion of gross national product in the Eisenhower years it ran between 10 and 11 percent after World War II and with no present threat as we see it in the Kennedy years it ran between 8 and 9 percent before the Vietnam buildup.

Senator PROXMIRE. I have the figures in front of me here. Before the Korean war it was 4.7 percent in 1950. You are right, in 1955, still winding down the Korean war spending 10.5. It was 9, 9, 9 and then 8.9, 8.5, 7.4 in 1965. In the Vietnam war it went up to 8.9, 8.6, and so forth.

So, that during his time as Secretary of Defense it was higher than it is now. The situation is quite different in that the peaks of 9 and 10 percent were reached under war conditions.

Secretary ORR. The thing that disturbs those of us who represent the military, Senator, is the fact that some of this is driven by a desire to reduce the deficit, which is a laudable desire. But when you look at military spending over the past 20 years it has been relatively level in true dollars whereas social spending has gone up somewhere between 200 and 300 percent.

I really regret the fact that people think it is defense spending that is driving the deficit.

Senator PROXMIRE. I think you can make the argument, and I apologize to the chairman, I won't take much longer, but I don't think we should peg defense spending to the gross national product under any circumstances. We should spend everything we have to spend to secure the country and not one nickel more. If it is 2 percent, that is great. If it is 10 percent, that is regrettable, but we have to do it.

Would you agree with that?

Secretary ORR. I think you and I agree that defense spending should be pegged to the threat. You don't just assume an arbitrary figure and say we will spend 7 percent. If there is no threat, there would be no reason to spend anything like 7 percent.

Senator PROXMIRE. I think we have discussed that and I thank you very much.

Thank you, Mr. Chairman.

Senator RUDMAN. Mr. Secretary and General, just a couple more questions.

FORTY TACTICAL FIGHTER WINGS

You are submitting your proposal to extend tactical fighter wings from the present 36 to forty-four? Your 1984 report says this goal is based on your need to employ forces worldwide. That is a major commitment.

The question I have is, number one, do you really think in light of your entire budget, your outlays in future years, it is affordable? How was it developed and how does that translate into 44 tactical fighter wings in terms of the worldwide commitment?

General GABRIEL. Forty or forty-four? We are trying to build 40.

Senator RUDMAN. Looking at your long-term outlay, forty-four is what we have.

General GABRIEL. Forty wings has been our goal for a number of years. We have never been able to get more than the equivalent of about 35. The Soviets have about 105 around the world. So, we don't think that is unreasonable to try to get to the 40-wing level.

You know the global commitments we have. You know the treaties we have with other nations. We may have to fight simultaneous wars. That would be hard to do, Southwest Asia, NATO, the Pacific. Today we would have to make some hard decisions such as we did in World War II about emphasis in one theater, to take Europe first and Hilter and then the Pacific next.

We would have to face those decisions today. This would give us a much greater capability if we do build to the 40 to handle one single threater in good shape and still maintain the capability to hold in other areas.

Senator **Rudman**. What you are saying is 40 is the optimum and ideal as a planning number?

General **Gabriel**. The optimum and ideal is a lot more than that. It would be approaching what the Soviets have. We are not even advertising that. There is a lot of risk built in, of course, with the 40.

LANTIRN PROGRAM

Senator **Rudman**. Let me move back to one specific program and then the general subject and we will wind this up.

I don't want to get into the history of the LANTIRN program because we all know the history. You weren't in your present positions when most of this history was written. You have redirected the effort and I wonder whether or not what you are going to have is really going to be worthwhile.

My understanding is that it is going to be a single pod, electrical fire system. It is not going to have any target designation capability.

In the light of what it was supposed to be originally, is that something you have dropped altogether?

General **Gabriel**. We will get the first pod next month which will be the navigation pod and the other one this summer which will be the targeting pot. We will have the two pods. I don't know whether it will be cost effective or not until we get it and work it out.

I do know that the requirement obviously is there. We have to get down below the weather and have to operate at night to handle the target. In Europe for 80 percent of the time in the winter, it is below the weather, at night or in times when you cannot operate unless you have such capability, an IR capability or FLIR to operate at night or below the weather.

We have to have that. This is the only game in town now. If we can't make it work cost effectively, we will have to look someplace else. I am confident we can find something here that we can use.

Senator **Rudman**. I don't understand why there could not be modifications to the systems you have now on the squadrons of FB-111.

PAVETACK

General **Gabriel**. PAVETACK is a very good system. The F-111 is the only fighter that can use it because it has a bomb bay. If you put it on an F-4 which we tried to do, you don't have the payload. It is heavy. You don't have the range-payload.

For any airplane, especially an F-16, a light-weight fighter, weight is crucial. If you put a big pod like the PAVETACK on it, that will reduce the payload. We will have to find something smaller than that to do the job, hopefully, that the PAVETACK can do. That is what we are looking for.

Senator **RUDMAN**. Are you working it out with the Navy on some of the programs they are using?

General **GABRIEL**. We have looked at that. Their FLIR is not designed for this purpose. We were told we should compete. We would have to make some changes on that in order to have it seriously compete with the FLIR we have. The Navy has not had the money to put into that to modify their pod.

MANAGEMENT OF PROCUREMENT PROGRAMS

Senator **RUDMAN**. Finally, Mr. Secretary and General Gabriel, I want to address the same question that I did to Secretary Marsh and General Meyer a few days ago.

Many of your answers today reflect upon the past history of procurement. A very pretty picture in terms of the lines of growth of the past practices and how they are going to be changed.

It seems to many of us that one of the problems lies in how those programs are managed, mainly that they are managed by your military people rather than civilians. I say that with no criticisms toward the military.

The fact of the matter is, given the career track, regardless of how many arguments you want to give me against it, the fact still exists that one of your top-notch people, given a choice to command a wing vis-a-vis running the LANTIRN program, you know what he is going to do. He is going to command a wing because that is a better way to get promoted and that is a better way to get his career advanced.

In addition to that, it is also a fact that we have very few instances of people running these programs who are willing to admit failure because to admit failure in the military service goes against everything you have been taught.

The fact of the matter is that many of these programs have failed and probably should have been eliminated years ago, but faced with billions of dollars of investment, they are going to be finished.

What thought are you going to give to revamping the way you manage your procurement programs in the U.S. Air Force, the service with the largest procurement budget of all the services?

Secretary **ORR**. In the first place, Mr. Chairman, our programs are managed by the military and by the Logistics Command and Systems Command which are big procurers. Those are by and large managed by civilians.

PROGRAM MANAGERS

Senator **RUDMAN**. Who are the program managers of these various systems, civilians or military?

Secretary **ORR**. Military.

Senator **Rudman**. Those are the people I am talking about, Mr. Orr.

Secretary **Orr**. I want to quote a bit of civilian experience. Sometimes it is useful. There are disadvantages to the interchange of program managers, no question about it. There are some disadvantages to the maintenance of continuity.

I was an automobile dealer. The insurance companies have adjusters. It was to their advantage to periodically change those adjusters before they became too close to the people they were dealing with. In other words, you get very familiar with a given dealership. You think he does good work and then you get lax and don't get competitive bids.

So there are advantages also to a program manager who comes in new and says I want to take a good hard look at that as opposed to someone who has been doing business with that same contractor with all the civilian experience.

Senator **Rudman**. We don't disagree with that.

We are beginning to look at these programs, and have been looking at the SAR's with more scrutiny than ever before because we are strong supporters of the necessity to increase our capability to meet acknowledged threat and I don't agree that there is any dispute about the threat.

I have had the briefing and the threat does exist. If we are going to maintain consensus of support in the country, we can't have the kind of horrible examples of mismanagement that we have had with these programs in the past.

I don't care if he was a top-notch commander or field grade officer or general officer from any of the services, putting him in the procurement track for 3 or 4 years and asking him to compete against the executives, accountants, lawyers, marketing people that the defense contractors employ, is not very fair. By the time he really learns where the bodies are buried he is ready to move on to his next job.

The point many of us are starting to make around here is that we either need acknowledgment in the military that being in the procurement business is just as honorable a career as flying F-86's in Korea or we ought to go get some good people with MBA's, bring them in, pay them higher salaries, and have a procurement cadre of civilians as smart as the people they are working with.

I get the feeling sometimes that we get taken to the cleaners, not because we want to, but because we are outfought in the procurement area. I hope you will give some thought to that because a lot of us up here are giving some thought to it.

Secretary **Orr**. I think your words are well spoken. I am not trying to argue. The head of our Systems Command is a nonrated officer. It is the first time we have had a four-star in that position, that is an officer who would not be flying F-86's in a foreign country. So we are conscious of making careers for people in the top jobs who are not necessarily rated officers.

Again, I might say in the logistics business where we have had some recent newspaper publicity about cost overruns it is not so much whether you wear a blue suit or civilian suit, it is management that comes from General Gabriel and me down that I think is important.

As I said at the outset, we are trying. We are not making any guarantee, but we are very conscious of the problem.

LENGTH OF TOUR FOR PROGRAM MANAGER

Senator **Rudman**. What is your present tour for a program manager? How long do they serve in managing a particular program?

General **Gabriel**. I would say an average of about 3 years. It would, of course, be determined by the program itself and carrying it through.

Senator **Rudman**. Would a career track normally come from some operational unit into procurement or would they be coming from other administrative positions?

The Army and Air Force, I think, are quite different in this particular respect.

General **Gabriel**. It could be. I think for the most part we do not put anybody in that job cold. They will have had some experience in the acquisition business.

General **Spangrud**. Sir, I spent the last 5 years in the Air Force Systems Command. Generally, if you look at the officers who have been in there, they have spent a minimal amount of their time in the operations side.

General Thurman who is the B-1 manager has been in Air Force Systems Command or procurement side his whole career, 27 or 28 years.

Gen. Jim Abramson who managed the F-16 also managed Maverick. He has had several programs.

When we say 3 years, that is in a program. They move on to higher responsibility. General Abramson is now managing the space shuttle. Generally these people are professionals in that business. They have spent their whole tour as General Marsh has who is a nonrated officer. He has spent his whole career in that business.

Senator **Rudman**. I am aware of the Systems Command. That is quite different from the other services. Maybe you have less of a problem. If you do, then we will compare your SAR's to the Army's and Navy's.

Thank you very much for being here.

SUBMITTED QUESTIONS

Before we recess the hearing, we will insert the submitted questions and answers at this point.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

AFFORDABLE COMMITMENT

QUESTION: Mr. Secretary, the Air Force wants to expand tactical fighter wings from the present 36 to 44 in the long term. Your 1984 report says this goal is based on the need to employ forces worldwide. That's quite a commitment. Is that an affordable commitment? How was it developed? And ~~how does it~~ translate to 44 tactical fighter wings?

QUESTION: Is the Air Force plan to increase its tactical air wings from 36 to 40 reflected in this budget? What is the justification for this buildup? Was consideration given to providing our Air Force Reserve units with more modern equipment in lieu of this increase in active tac wings?

ANSWER: The current five year defense plan projects a tactical fighter force growth from 36 to 40 wings. This growth is a necessary step toward meeting our global commitment and is affordable at projected budget levels. The long term Air Force goal is to reach 44 fighter wings in the 90's. Tactical force growth must properly blend aircraft procurement, retirement, and modernization and ensure that force capabilities are maximized and costs minimized. This growth will improve our warfighting capability and help support U.S. national commitments.

Our overseas commitments use one-third of our total tactical fighter forces, another third are stateside units which can be rapidly deployed overseas, and the final one-third are Reserve units for mobilization during a national crisis. In considering transfer of more active units to the Air Reserve Forces (ARF), we must weigh the benefits against the negative impacts on morale, retention, and accessions from more frequent overseas assignments for active duty personnel. OSD is now reviewing initiatives to expand the ARF's role to efficiently increase our combat effectiveness.

As the Air Force builds its tactical force structure, it also modernizes the Guard and Reserve forces. This year the Air National Guard unit at McEntire ANG Base, SC, will receive the F-16, and in 1984 the Reserve unit at Hill AFB, UT, will be equipped with the F-16. Also in this budget period, the Air National Guard will begin to receive modern aircraft to replace the aging F-106 interceptor force.

AMOUNT FOR ADEQUATE FIGHTER PRODUCTION RATE

QUESTION: You say on the one hand you need to go to 44 fighter wings, but your report says current production rates will never achieve that. Your $22.7 billion aircraft procurement budget for 1984 has a real growth of 23 percent. How much more would you need to establish an adequate fighter production rate?

ANSWER: To accelerate the growth of the tactical fighter force by one wing per year would require increased procurement of approximately 95 aircraft per year. In FY 1984 that would require between $1.5 billion and $2.0 billion, depending on the particular number of each type of aircraft procured.

Although there is substantial real growth in the FY 84 aircraft procurement budget, most of this increase is for procurement of high-priority, large aircraft like the B-1B and the C-5B. In the future, fighter procurement is programmed to increase to permit us to reach our objectives.

TARGET DATES/LONG-TERM COST

QUESTION: (U) What is the total long-term cost of going first to 40 and then to 44 fighter wings, and what are the target dates for achieving these goals? (Details in 1984 constant dollars).

ANSWER: (U) Today the AF has 36 tactical fighter wings (TFW) with about 72 aircraft per wing, and we plan to grow to 40 TFWS by FY 88. Our long-range objective is to build 44 wings in the early 1990s. Procurement between FY 84 and FY 86 (FY 86 procurement will be delivered in FY 88) will total $16.5B.

Expansion to 44 TFWs by the early 1990's would require procurement of approximately 100 additional fighters per year above the rate necessary to sustain the force at the 40 wing level and would cost about $2.3 billion per year.

NO. OF AIRCRAFT & COST

QUESTION: You also want to attain a 66 million ton-miles per day airlift capacity, apparently by the year 2000. How does that translate into numbers of aircraft and cost?

ANSWER: Our goal is to attain a minimum of 66 million ton-miles per day (MTM/D) of intertheater airlift capability. To reach about 50 MTM/D by 1989, we plan to procure the C-5B, KC-10, and additional CRAF Enhancement aircraft. The remaining 16 MTM/D capability will be met by the C-17 and any additional CRAF Enhancements. Our C-17 procurement will follow the C-5B production. The C-17 will replace some C-130s and the C-141 as they begin to retire in the 1990s.

The approximate TOA for each system follows.

Aircraft Type	Number Procured	Procurement Costs through 1989
C-5B	50	$8904.5M
KC-10	44	3004.3M
CRAF-Enh (747)	22	1041.0M*
C-17	**	7705-10375.6M***

* CRAF Enhancement funds are 16 year life cycle costs.

** The C-17 procurement schedule is two aircraft in FY 88 and six in FY 89 to achieve an IOC in FY 91.

*** Total funds include RDT&E and procurement costs. A range is shown because status of FY 83 funds is unclear; therefore, subsequent years are also unclear.

QUESTIONS SUBMITTED BY SENATOR WEICKER

"HUNGRY FOR BUSINESS"

QUESTION: Won't it be more difficult for the Air Force to negotiate a multi-year arrangement in the future, when the contractors will presumably be in better shape because of the recovery and less "hungry for business"?

ANSWER: Multiyear contracts provide contractors assurance that the Government is making a relatively long-term commitment to production of a weapon system. We believe contractors will be just as interested in the security of a multiyear arrangement after the recovery.

ALTERNATE FIGHTER ENGINE COMPETITION IMPACT ON F-16

QUESTION: General Gabriel, it was my understanding that under the auspices of the Memorandum of Understanding between our five-nation NATO consortium of companies producing parts for the F-16, that any change which would affect the agreement required approval by the five-country steering group. If that is in fact true, has this steering committee been appraised of the alternative fighter engine competition and its possible impact on their program? If so, what has been their reaction?

ANSWER: Since the alternative fighter engine competition will not affect the 998 aircraft program defined by the Memorandum of Understanding, formal approval by the Multinational Steering Committee is not required. We have, however, presented our plans for the engine competition to the Steering Committee and discussed the concerns presented by the Europeans. We have also required both companies competing for the alternative fighter engine to include an option for coproduction in the European consortium countries as part of their proposals.

Although the participating European countries have reservations about any modification to coproduction arrangements, they have been receptive to our attempts to achieve maximum program savings while continuing to consider European interests.

MORE THRUST

QUESTION: General Gabriel, are you aware of a recent letter from General Dynamics Vice President for Research and Engineering, Charles Anderson, advising the Air Force that "more (engine) thrust may be required for the F-16 and F-15 (fighter planes), whether in their current configuration or in derivative forms"?

ANSWER: The February 3, 1983, letter confirms the long-standing Air Force position that increased thrust is not required for today's fighter engine, stating that: "In the absence of any well-defined threat that could require higher F-16 thrust-to-weight, no particular benefits of improved engine performance were found."

The letter does suggest that more thrust may be necessary in the future and goes on to recommend a study by General Dynamics on the future threat and whether increased thrust might be required. It supports the on-going engine model derivative program (EMDP) as a way to provide increased thrust engines to meet an evolving threat. The letter recognizes and supports the need for long-term planning as part of the EMDP strategy.

USE OF $30 MILLION

QUESTION: General Gabriel, would you tell this Committee how you intend to use the $30 million appropriated for a higher thrust F100 in '83 and why the '84 budget contains no funding to continue that development?

Is there a possibility that this $30 million will be rescinded in 1983?

ANSWER: As directed by Congress, the net $28 million addition to the Engine Model Derivative Program is to expand and accelerate the limited demonstration of a higher thrust F100 engine. The FY 84 budget request includes $11.9 million to continue this effort.

Any decision to request rescission of FY 83 funds would be made by the Secretary of Defense. We cannot comment on what OSD may or may not intend to do.

Questions Submitted by Senator Garn

INCREASE IN END-STRENGTH

QUESTION: What is the justification for increasing the Air Force's active duty end strength by 20,000? Could these mission requirements be met within the existing force levels of the Air Force?

Why do you need a 22,000-man increase in your end strength?

ANSWER: The FY 1984 President's Budget reflects an Air Force end strength increase of 20,100. This increase reflects the force structure increases and initiatives taken to improve overall readiness to meet the existing threat, and the accession training associated with the increased requirements. Specific increases are due to the following programs:

	(Figures in 000's)
FY 1983 End Strength	592.5
Strategic Bomber Force	+1.1
Missiles (ALCM, GLCM)	+1.3
Wartime Readiness Initiatives, (Prepositioned Equipment Air Base Ground Defense, Critical Skills Conversions, RDJTF, Chem-Bio, Medical, European Distribution System)	+2.1
Tactical Force Structure	+2.3
Intelligence/Special Projects	+1.4
Command, Control and Communications (NAVSTAR/GPS, Tactical T&CCP Equipment, DCSC, CSPC/Satellite Control, STS Level II Security)	+1.6
Airlift Programs	+.3
Transients	+1.0
AWACS/NATO AEW&C	+.3
Base Operating Support	+.6
Increased R&D Capability	+.9
Net Contract Adjustment	+1.1
Joint Surveillance System (JSS)	-.9
TITAN II Phasedown	-.3
Other Training Initiatives	+1.7
Increased Personnel Accession Training	+5.5
Net All Other	+.1
Net Change	+20.1
FY 1984 End Strength in President's Budget	612.6

To fulfill Defense Guidance, the Air Force develops the scenario and programs that are required to support the national strategy. Based on these programs, manpower requirements are determined using a systematic process. Other programs would have to be reduced or cut to support the above requirements within existing force levels.

FORCE LEVELS IN EUROPE

QUESTION: Do you plan to increase your troop strength in Europe in FY 1984? Please give us the details, and explain why you can't stabilize your force levels in Europe.

ANSWER: The Air Force plans a modest increase in European troop strength for FY 1984. The increase supports our readiness and force modernization programs such as GLCM and TR-1. European troop strength increases are directly related to the development of new capabilities which are necessary to offset the growth of the Soviet and Warsaw Pact threat over recent years.

C-17 IOC

QUESTION: Is a 1991 IOC a realistic one for the C-17? Do you have the flexibility to accelerate the C-17 and cap C-5B production below 50 aircraft if that becomes necessary?

ANSWER: The 1991 IOC for the C-17 is realistic and is phased with other airlift acquisition programs to stay within projected budget levels. The C-5B and C-17 schedules efficiently mesh, with C-17 deliveries following the last C-5B to continue the uninterrupted build of airlift capability.

As is true with most programs, the C-17 could be accelerated if additional funds were available. However, while it is possible to cap the C-5B buy at 15 or 31 aircraft after the FY 85 or FY 86 options are exercised, the capability gained by accelerating the C-17 to an FY 89 IOC would not give us the same early capability provided by procuring all 50 C-5Bs. Our comprehensive airlift program provides the most balanced capability in the quickest time.

C-17 LOGICAL APPROACH

QUESTION: Isn't the C-17 a logical candidate to replace the C-130's and C-141's in the out years? And isn't this a more logical approach on a cost basis to the scenario you are now pursuing?

ANSWER: Yes, the C-17 is a logical replacement for the C-141s and some of the C-130s. We plan to replace approximately 110 C-130A and D models when they reach the end of their service life in the early 1990s. The remaining 440 C-130B, E, and H models will remain in the inventory into the next century. This mix of C-130s and C-17s will provide an effective intratheater airlift force while increasing and modernizing our intratheater capability without a corresponding growth in force structure. In addition, as the C-141s begin to retire at the turn of the century, the C-17 will be their logical replacement.

Our airlift program expands CRAF Enhancement and procures KC-10s and C-5Bs in the near term, followed by C-17 acquisition to continue the uninterrupted build of airlift capability toward the Congressionally Mandated Mobility Study (CMMS) objectives. This approach is fiscally responsible under current budget limitations and provides a balance of outsize and oversize/bulk capability as soon as possible.

REVISED PRODUCTION SCHEDULE

QUESTION: The revised production schedule on the C-5B appears to be stretching out the acquisition plan. Is this cost effective? Why?

ANSWER: The production schedule for the C-5B as shown in the President's FY 84 Budget is based on the 26 October 1982 contract award. Earlier profiles were based on a planned contract and program initiation in April 1982. The current buy and delivery schedule are cost effective.

DETAIL FUNDING ESTIMATES FOR C-17

QUESTION: If the Air Force were to pursue an accelerated development schedule for the C-17 -- as intended by Congress with the 1983 funding decision -- what level of appropriations would be required in FY 1984? Please detail funding estimates for the record and include revised full development and IOC targets.

ANSWER: The Air Force has submitted to OSD the necessary reprogramming documentation for the additional $59 million in FY 83. If the reprogramming request were approved and the funds obligated in FY 83, an increase in FY 84 funds to approximately $100 million would provide a smooth, accelerated buildup of the research and development effort so that full scale development could begin in FY 84. This C-17 program would permit the first C-17 deliveries to follow the last C-5Bs, providing an uninterrupted build of airlift. Research and development and aircraft procurement funding for an FY 91 IOC profile is shown below.

($ in Millions)

FY83	FY84	FY85	FY86	FY87	FY88	FY89
60.0	100.0	230.7	470.0	950.0	2600.0	3200.0

REALISTIC C-17 IOC

QUESTION: How will the Air Force provide the outsize cargo capability it says it needs in the 1980s if C-17 development and production are stretched out as you now propose? Is a 1991 IOC realistic in light of established airlift requirements?

ANSWER: The Air Force's program for near-term, intertheater, outsize airlift is the C-5B. It offers the fastest available outsize capability.

The FY 91 IOC for the C-17 is realistic and is phased with other airlift acquisition programs to stay within projected budget levels. The C-5B and C-17 schedules efficiently mesh, with C-17 deliveries directly following the last C-5B. This plan will continue the uninterrupted build of airlift capability toward the Congressionally Mandated Mobility Study (CMMS) objective. The C-17 will provide needed airlift capability well into the twenty-first century, including intratheater outsize capability.

DERIVATIVE TACTICAL FIGHTER

QUESTION: The Air Force is requesting $126 million to continue development and initiate procurement of the derivative tactical fighter, a dual mission modification of either the F-15 or F-16. At the outset, we were told this was a competitive program and one of the candidates would be selected. Now, in your 1984 report, you talk about working these improvements into the production of both aircraft (page 33). Does this mean the Air Force is still thinking of buying both of them?

ANSWER: Both the F-15 and F-16 will require continued improvement to keep pace with the growing, sophisticated threat. Possible improvements, which have been evaluated for affordability and combat capability, will be incorporated through modification programs. However, only one aircraft will be developed to a Dual Role Fighter with two seats, missionized rear cockpit and night/under the weather attack avionics. Furthermore, production of the Dual Role Fighter aircraft will be made within the programmed procurement of F-15s or F-16s.

ACCURACY OF ESTIMATES

QUESTION: Last year, when you were talking about buying 400 of the derivative fighters, you estimated it would cost $16 billion for the F-15E and $12 billion for the F-16E. Are those estimates reasonably accurate? Isn't that a pretty wide cost disparity for aircraft that are expected to have similar capabilities?

ANSWER: We are now evaluating improvements to both aircraft based on combat capability and affordability. Our assessment will evaluate cost and effectiveness trade-offs to determine the best alternative. Results of our comparative flight test program and appropriate recommendations will be presented to Congress starting this summer.

The available comparative cost estimates for the F-15E and F-16E (shown below) were based on the configurations and production quantities and rates in the President's FY 84 Budget. The actual cost for different configurations and/or quantities may change.

	F-15E	F-16E
Research and Development	$275M	$473M
Average Unit Flyaway Cost	$32.6M	$22.4M
Total Acquisition Cost (400 A/C)	$15.2B	$11.4B
Incremental Acquisition Cost*	$870M	$2492M
Incremental Unit Flyaway Cost	$1.6M	$5.5M

*The estimated additional costs (excluding research and development) to procure the F-15E and F-16E in place of 400 F-15C/Ds or F-16 C/Ds already planned.

COST/PERFORMANCE FACTORS JUSTIFY EXPENSE

QUESTION: It would appear that continuing the engine competition is an expensive proposition. Do the ultimate cost and performance factors justify that kind of expense?

ANSWER Yes. Although the competitive process may require some additional funding, we believe that the final results will more than justify the initial cost. In fact, we believe that it would be more costly to continue sole source engine procurements. Our initial estimates show that competition will produce savings over the current program because we will achieve markedly reduced support costs. Assuming a 15% savings due to competition, we estimate a life cycle cost savings of up to $2 billion on 2,376 engines. Increased performance alone has never been an objective.

COMPETE LANTIRN TARGETING POD

QUESTION: Mr. Secretary, your report indicates the Air Force has prepared a plan to compete the LANTIRN targeting pod against the improved FLIR variant to provide all-weather and night capability for tactical missions. But Congress has denied any funds to conduct such a competition. Where does that program stand now?

QUESTION: Which would the Air Force prefer to do, speaking candidly? Compete the two night attack systems or go with the LANTIRN? Why?

ANSWER: The Air Force submitted a letter on October 1, 1982 to the Senate and House Armed Services and Appropriations Committees in which it was certified that the LANTIRN program had been restructured to provide competition as required in Section 203 of Public Law 97-252. However, the letter highlighted that the competition depended on the availability of a suitably modified F/A-18 FLIR pod, which is a Navy funded and managed program.

Later Public Law 97-377, dated December 21, 1982, prescribed that no FY 83 funds appropriated are to be made available for any competition between the currently approved LANTIRN system and any other system under provisions of Section 203. The limitations of Public Law 97-377 have constrained the Navy from taking any action in response to an unsolicited proposal from Ford Aeroneutronics for developing a modified F/A-18 FLIR pod for the proposed competition.

The Air Force commitment to conduct a competitive development with a suitably modified F/A-18 FLIR pod still stands; however, since the Navy has been unable to initiate this effort as planned, it is highly unlikely that the competition could be completed without major changes to the LANTIRN schedule and program costs. The urgent requirement for the night attack capability LANTIRN provides has not diminished.

We will take delivery of the navigation and targeting pods this summer. After evaluating them and considering their cost, we will be in a better position to proceed.

BUDGETED PROCUREMENT FUNDS FOR AIRCRAFT

QUESTION: Mr. Secretary, we find the Air Force moving swiftly toward a growing reliance on chartering aircraft as an alternative to the normal procurement process. Last year we gave preliminary approval to your plan to charter light transport aircraft to replace the C-140, and now the Air Force is working on a plan to lease 120 lighter aircraft to replace the CT-39's now in service. In both instances, the aircraft would be maintained by the contractors.

Would the Air Force have budgeted procurement funds for these aircraft if the lease option had not been available? Why?

ANSWER: Probably not. Initiatives to replace the aging CT-39 fleet have been reviewed almost every year for the past five years. The CT-39 replacement has not competed successfully for available procurement funds. This would likely have been the case for FY 84 as well. Regarding C-140 replacement, leasing obtains replacement aircraft earlier than presently available procurement funding permits and is a short term measure pending procurement funding in FY 85.

We do not see leasing as a major component of our systems acquisition program. Only recently has leasing become an alternative for certain systems, particularly off-the-shelf systems. We consider leasing on a case-by-case basis, recognizing that specific enabling legislation is required for any long term leasing program.

AF PLANS FOR TRANSPORT REQUIREMENT

QUESTION: The CT-39 charter proposal was an unsolicited one. What were the Air Force plans for transport requirements before that proposal arrived?

ANSWER: Prior to the unsolicited Cessna proposal, several alternatives for CT-39 fleet modernization were under study. One alternative was a complete rebuild of the existing aircraft. Due to the risk in modifying an obsolete aircraft and the significant cost ($3.5 M/aircraft), this option was not favorably considered.

Another option was to extend the aircraft service life (22,000-40,000 hours/aircraft) with more limited modifications such as rewiring electrical systems, reskinning wings, tail and fuselage, and updating avionics. However, this would cost about $120M to modify the fleet without reducing the high cost of spares and maintenance on an obsolete, out-of-production aircraft.

The unsolicited proposal showed the feasibility of replacing the CT-39 fleet with commercial, "off-the-shelf" aircraft within the existing O&M Obligation Authority for the CT-39 fleet.

EXECUTIVE JETS

QUESTION: Let me ask a basic question: why do you need up to 221 of these executive jet type aircraft? Do wartime requirements really justify such a large fleet of executive jets?

ANSWER: Multitheater and CONUS wartime movement requirements, as outlined in the Operational Support Airlift Wartime Requirement Study, justify the need for up to 221 aircraft. Theaters include Europe, Southwest Asia, Korea, Alaska, and Panama. Wartime support requirements include:

a. Transporting command and staff personnel, medical teams, maintenance teams, civil engineers, flight crews, security police, airlift control element personnel, and prisoners of war.

b. Transporting information, to include intelligence data, fragmentary orders, and courier material.

c. Small parts resupply, including critical aircraft and non-aircraft spares within a theater.

d. Medical supply/resupply, including transfer of medicines and blood shipments plus a medical evacuation capability.

LARGER LIGHT CARGO AIRCRAFT

QUESTION: Staff analysis of your T-39 replacement program found 80 percent of your wartime requirement is overseas and mostly cargo. Since only about 25 percent of your fighter parts and cargo will fit into the T-39 size aircraft, why don't you opt for a larger light cargo aircraft with more capabilities?

ANSWER: A larger light cargo aircraft in lieu of an off-the-shelf business type aircraft is not needed to accomplish the CT-39 mission and would provide unused capacity at higher cost.

The CT-39 replacement aircraft will provide time-sensitive movement of personnel and cargo in support of wartime requirements. The utility of these aircraft is their flexibility to respond to a variety of missions, over significant distances, in a timely manner. The assumption that CT-39 wartime requirements are primarily cargo is mistaken. Of the identified passenger/cargo requirements, 64 percent are passenger and 36 percent cargo.

To meet these requirements we plan a mixed fleet of turbo-prop and turbo-fan aircraft. Ninety-five percent of the probable aircraft loads can be transported on a small business type aircraft with a 2500 pound capacity. Acquiring an aircraft with capabilities in excess of the 95 percent capacity requirement would result in unnecessary expenditure of funds. A larger aircraft would have unused capacity, burn additional fuel to accomplish the mission, and be more costly to operate and maintain than a smaller aircraft.

In addition to improving and modernizing the CT-39 fleet, the small replacement aircraft will also correct some of the present CT-39 cargo deficiencies. For example, the replacement aircraft will have a cargo door to allow larger items to be moved, thereby providing more flexibility and combat utility.

T-39 REPLACEMENT PROGRAM

QUESTION: The Air Force cost study on the T-39 replacement program was limited to a straight 20-year lease proposal. Why didn't you cost out the 5 to 8-year lease alternative with options for purchase or renewal?

ANSWER: The lease proposal was costed on a five-year basis with a three-year renewal option. The cost of this proposal, rather than a straight

20-year lease, was then used to depict a 20-year program. This method was chosen instead of the straight 20-year lease because the 20-year lease would cost less and would have shown a greater advantage to leasing. We wanted to present the "worst case" for leasing to avoid the appearance of biasing the alternatives toward leasing. But we also wanted to show a full 20-year program to determine if the buy option would become more economical than lease within that 20-year period.

TAX EXPENDITURES

QUESTION: Your cost analysis did not appear to consider the potential loss of tax revenue to the government from contractor depreciation of the aircraft. Do you have any estimate of the tax expenditures involved in the lease approach?

QUESTION: Doesn't that change the balance substantially?

ANSWER: We do not have an estimate of the tax expenditures involved in the lease approach; however, we are currently looking at the impact of leasing on treasury revenue to determine what changes, if any, should be made in the lease/buy analyses. Efforts to date, indicate that it does not change balance substantially.

CORRECT DEFICIENCY

QUESTION: Under current broad authority, the Congress has no advance review of these leasing proposals, although they involve substantial obligations over the long term. Do you have any recommendations on how to correct that deficiency?

ANSWER: All of our procurement programs, whether lease or buy, will be reviewed and approved by the Air Force, OSD and OMB before going to the Congress for final approval. Even in such a case where a specific line item appropriation is not required, there will be thorough review at all levels as part of the normal justification process for the operation and maintenance appropriation.

UTILIZATION OF LIGHT CARGO AIRCRAFT IN ALASKA

QUESTION: How would these light cargo aircraft be utilized in Alaska? Wouldn't they be more efficient than the C-130's now employed in the remote area supply mission?

ANSWER: The three C-12 aircraft planned for Alaska are for wartime support in the following areas:

a. Transporting command and staff personnel, medical teams, maintenance teams, civil engineers, flight crews, security police, and airlift control element personnel.

b. Transporting intelligence information to include fragmentary orders and courier material.

c. Small parts resupply, including critical spares.

d. Critical medical supply/resupply, including transfer of medicines and blood shipments plus a medical evacuation capability.

e. Support of remote radar installations.

With regard to efficiency, although smaller aircraft are more fuel efficient, cargo volume/weight requirements are such that we also need a larger aircraft. The force structure (both C-12s and C-130s) in Alaska is an efficient mix. Additionally, the C-130 aircraft stationed there provide wartime intratheater airlift for all Services, while the C-12 aircraft provide Air Force support in the mission areas outlined above.

PRIVATE CARRIERS AT LESS COST

QUESTION: On the other hand, we hear complaints that the Air Force is transporting cargo in Alaska that could be handled by private carriers at less cost. Has anyone given that problem any serious attention?

ANSWER: We believe the current mix of military and commercial airlift in Alaska provides for movement of military cargo at the lowest cost to the taxpayer. Transporting cargo with military airlift in Alaska is a by-product of readiness training for military aircrews. Therefore, the cost of using military airlift is not an incremental cost to the taxpayers. The cost of commercial airlift, on the other hand, is additional to the funded readiness flying hour program.

When military airlift is not available, the Air Force uses commercial carriers. Two on-call contracts with Alaskan International Air and Northern Air Cargo are used to support requirements which cannot be handled by military airlift. In Fiscal Year 1982, the cost of these two contracts was nearly $1,000,000. The Air Force also has a contract with Pacific Alaska Airlines for routine transportation of passengers and cargo to northern Alaska's DEWLINE sites. The cost of this contract in Fiscal Year 1982 was $1,390,000. The Air force also uses Northern Consolidated Airlines to move outsize cargo to remote sites as required.

PERCENTAGE/INITIATIVES FOR SPACE-RELATED ACTIVITIES

QUESTION: Mr. Secretary, your annual report makes little mention of space programs and the space budget for FY 1984. What percentage of this year's budget request is for space-related activities, and what initiatives are proposed?

ANSWER: The FY 84 Air Force budget request for space-related activities is approximately 8 billion dollars. This figure represents roughly 9% of the Air Force Total Obligation Authority. The request is divided into the following categories:

	(TY$ IN MILLIONS)
Navigation	$ 377
Communications	$ 654
Warning	$ 562
Weather	$ 107
Vehicle & Vehicle Development	$1252
Ground Support	$ 741
Supporting R&D	$ 796
General Support (Including Special Activities)	$3511
	$8000

Space-related initiatives include:

- Continue GPS production satellite block buy, IOC 1988
- Continue DSCS III production with purchase of 4 sets of Economic Order Quantity parts
- Complete purchase of 4 DSP satellites, started in FY 82
- Continue ASAT flight tests, [deleted]
- Continue MILSTAR development, [deleted]
- Continue construction of CSOC

More specific information on all space-related efforts is currently being compiled into a consolidated DoD book, which will be available in April 1983.

PROPER EMPHASIS

QUESTION: Critics continue to argue that space-based defense systems are underfunded. In view of the potential advantages, are we giving this requirement proper emphasis?

ANSWER: We are examining a number of appropriate technologies to determine space defense feasibility, weapon utility, and cost effectiveness. Our work to date shows, however, that the maturity of promising candidates, such as lasers, is not sufficient to commit to large-scale weapons development programs at this time.

Each space-based defense effort is funded according to its potential payoff and must compete in the budget cycle with total Air Force requirements. We believe these programs are funded at the proper level to provide a correct balance between Air Force near-term requirements and long-term objectives.

ANOTHER SHUTTLE ORBITER

QUESTION: Is the Department satisfied that all of our defense satellite payloads can be managed with just a four shuttle orbiter fleet? Will we need another shuttle orbiter?

ANSWER: Under normal conditions, a four orbiter fleet is sufficient to meet DoD requirements. Loss or extended downtime of one of the orbiters--particularly one of the more capable vehicles, OV-103 or OV-104 — might make it necessary for us to exercise our national priority and preempt a flight intended for another user. This would cause disruption of schedules, but would allow for the satisfaction of national security requirements.

The Senior Interagency Group (Space) recently studied this issue. During their deliberations, the DoD position was that additional orbiters were not necessary to meet national security requirements. However, DoD did advocate maintaining a warm orbiter production capability as a hedge against unexpected difficulties.

TITAN III BOOSTER

QUESTION: You are no longer budgeting for Titan III booster production. Is it wise to forego a back-up expendable launch vehicle production capability?

ANSWER: We have procured enough Titan III (34)D boosters to meet both our prime and backup launch requirements. The FY 83 Space Boosters program contains long lead funding for vehicles #17 and #18. However, we have established the successful completion of the sixth Space Shuttle flight (STS-6) as the necessary criterion for a decision on continuing Titan production. If STS-6 is successful, as we expect, we will not proceed with procurement of the FY 83 long-lead materials but will begin production phaseout activities instead.

By 1986, in most of our programs we will have completed or will be committed to spacecraft design changes which will optimize those payloads for the Shuttle. This will make them incompatible with the Titan.

Titan production may well continue beyond the end of Air Force procurements, since a contractor consortium is preparing to produce and launch Titans as a commercial venture. If they succeed, expendable launch vehicle production could continue indefinitely.

EUROPEAN AIR BASE DEFENSE

QUESTION: Last year Congress appropriated $50 million to procure available weapons for the air defense of U.S. air bases in Europe. What's happened since then? What are you doing with the funds?

ANSWER: Initiatives to date have centered on providing a near term, off-the-shelf capability and on investigating cooperative arrangements with foreign governments.

Two major actions are in progress: (1) A USAF Point Air Defense (PAD)/Short Range Air Defense (SHORAD) Task Group is coordinating Air Force worldwide PAD/SHORAD requirements; and (2) OSD, together with the USAF and the Army, is investigating cooperative arrangements for PAD/SHORAD protection of continental European bases. No funds have yet been committed.

Offers for cooperative arrangements have been proposed by both the United Kingdom and the Federal Republic of Germany. An OSD-led team of USAF and Army air defense experts is currently in the initial phases of evaluating system effectiveness and costs associated with these proposals. A decision as to the feasibility of these proposals or a mutually acceptable alternative is expected by the end of August 1983.

BRITISH OFFER OF RAPIER MISSILE SYSTEMS

QUESTION: The committee is aware that the British Defense Ministry is offering a package of Rapier missile systems to be maintained and operated by RAF regiment personnel. Is that considered an attractive offer?

ANSWER: [Deleted.] The FRG has proposed a cooperative arrangement of its own whereby the FRG would procure, maintain, and operate Roland systems in defense of USAF bases in Germany in return for US procurement of Patriot for the FRG.

OSD, along with the Air Force and Army, is evaluating these and other options and expects to make a decision by the end of August 1983.

COST EFFECTIVENESS

QUESTION: What are the prospects of using this type of approach in Germany, perhaps using the Roland system? Does it appear cost effective?

ANSWER: Germany proposed a cooperative point air defense (PAD) arrangement to OSD on 1 February 1983. The thrust of the proposal was that Germany (FRG) would procure, maintain, and operate Roland systems for defense of USAF bases in Germany in return for US procurement of Patriot for the FRG. The FRG would man, maintain, and operate FRG Patriot systems.

A US/FRG Joint Expert Group (JEG) has been formed to evaluate the cost effectiveness of the proposed program and to discuss alternatives. The JEG expects to make a detailed report on program feasibility and cost effectiveness by late August 1983.

B-1B PROGRAM FUNDING

QUESTION: Can you assure the Committee that funding for the B-1B program will not draw needed funding from the Advanced Technology Bomber (ATB), thereby delaying the Initial Operational Capability for the ATB?

ANSWER: There is no conflict between the B-1B and the ATB programs, and both are adequately funded to meet the schedules presented to Congress. We are developing the ATB at the fastest prudent pace on a schedule leading toward achievement of an IOC in the early 1990s.

PERCENT OF DOD BUDGET FOR STRATEGIC NUCLEAR FORCES

QUESTION: What percentage of the DOD budget is allocated to strategic nuclear forces? How does this compare to that percentage of the budget which goes to general purpose combat forces? Does the percentage of the budget for strategic forces increase significantly over the course of the five-year defense program?

ANSWER: Fourteen percent of the DOD budget is allocated to strategic programs compared to 60% for general purpose programs. The remaining 26% is for Defense-wide programs such as intelligence, centralized support activities (communications, basic R&D, retired pay), and departmental administration. The percentage of the budget for strategic programs declines to about 10% by Fiscal Year 1988.

DANGERS OF A BAN ON SPACE WEAPONRY

QUESTION: What dangers do you see in negotiating a ban on space weaponry at this point in time?

ANSWER: It is important that we proceed cautiously in the area of space arms control given the nature of the Soviet space threat, the obstacles to effective verification, and the possibilities of breakthroughs in technology which could drastically change the role space would play in our national defense. For example, the Soviets already have an operational anti-satellite (ASAT) capability, but we do not. As history shows, the Soviets will never negotiate an advantage away.

The best approach at this time is to continue to study space arms control options and consider equitable and verifiable measures that would ban or otherwise limit testing and deployment of specific space weapons systems should those measures be compatible with US national security interests.

DANGERS OF BAN ON SPACE WEAPONRY

QUESTION: How would you compare the US anti-satellite (ASAT) capability with that of the Soviet Union?

ANSWER: The Soviet Union has had an operational ASAT since (d). Their [deleted] orbital interceptor has been tested 15 times, most recently in [deleted] and [deleted] and a [deleted] [deleted]. We believe the system has a [deleted] against all low altitude US satellites that do not take countermeasures when attacked.

The US currently has no ASAT capability. The system we are developing (the air-launched miniature vehicle ASAT) will be operational in [deleted] and will be effective against high-priority, low-altitude Soviet satellites. [Deleted.]

DANGERS OF A BAN ON SPACE WEAPONRY

QUESTION: How would you respond to the charge that the US has embarked on a program to militarize space?

ANSWER: We are not embarked upon a program to militarize space, but we must not ignore reality either. As in the 1920's when we were just learning about the possible uses of airpower, today we are on the threshold of military uses of space. And while some might believe that space can be kept a sanctuary and relatively free of military systems, history tells us that each time new opportunities present themselves, nations exploit them to gain military advantage. While our nation will continue to pursue avenues to foster the peaceful use of space, we and the Soviets are dependent on space for warning, communications and command and control. This dependence will grow. At a minimum, we have to ensure that our space systems can survive and operate in a hostile wartime environment.

With changes in the environment and technological advances, there will be a need to expand space support operations with on-orbit resources which could include space stations, shuttles, orbital transfer vehicles, energy generators, and manufacturing processes.

As national use of and investment in space increases, protection of our resources will become essential. Because such protection introduces the possibility of space-to-space, space-to-earth, and earth-to-space operations, it is in our national interest to be prepared to accomplish them. Such preparations also give us a hedge against technological surprise, and ensure we are not placed into a position of disadvantage by Soviet initiatives.

ALCM-B MISSILE VULNERABLE

QUESTION: There have been several news articles recently highlighting a change in direction with respect to the Air-Launched Cruise Missile (ALCM) Program. Would you review those changes for the Committee?

QUESTION: Has the Air Force suddenly become aware of developments in Soviet air defense capabilities which could render the current ALCM-B missile vulnerable?

QUESTION: Is it the issue of survivability that is driving the Advanced Cruise Misile (ACM) program?

ANSWER: No, the issue of survivability is not driving the Advanced Cruise Missile (ACM) program. We did not request further funding for ALCM-B in our FY 84 budget because we are constrained in the number of ALCMs we can deploy, and we would like these missiles to be as good as we can make them. With funding from previous appropriatons, production of the ALCM-B will continue into 1986. This will enable us to make a smooth transition to an advanced cruise missile should technology and cost permit.

Industry proposals for an ACM were received just a short time ago, and while we have not had the time necessary to examine them fully, the cost seems to be higher than we originally expected. Because of this cost factor, once our examination has been completed we may request reprogramming of funds in FY 1984 to continue ALCM-B production for at least another year. On the other hand, if a decision is made to procure the ACM, program details to include cost and schedule will be provided at that time.

ACM

QUESTION: How do you respond to the concern that the Advanced Cruise Missile (ACM) program is fraught with technological and schedule risks? How concurrent is the ACM program? Is it true that the Air Force intends to have 100 ACMs produced before the first missile undergoes a test flight?

ANSWER: We are currently evaluating competing designs for an Advanced Cruise Missile (ACM) submitted by Boeing, General Dynamics, and Lockheed. The degree of program risk varies among the three proposals and is a function of several factors, including each contractor's technological approach and proposed development schedule. Clearly, program risk will be assessed during source selection and will be a key factor in determining the winning design should we elect to proceed with the ACM program.

The degree of concurrency would depend to a large extent on the results of the source selection. All other things being equal, the Air Force plan would be to select the ACM contractor that has the lowest acceptable risk associated with his design and then initiate that program on a schedule which provides for orderly development and transition from ALCM-B to ACM production. Under none of the proposals would 100 ACMs be produced before the first missile undergoes flight testing.

I want to emphasize though that we have not made a decision to proceed with ACM development. By late April we hope to have sufficient data to recommend one of three courses of action: (1) terminate ALCM-B procurement in FY 84 and start a fast-moving ACM program, (2) cancel the ACM program and continue with ALCM-B, or (3) procure some modest number of ALCM-Bs in FY 84 while phasing in the ACM at a more deliberate rate.

UPGRADING OF CURRENT ALCM-B

QUESTION: Has the Air Force investigated the potential of upgrading our current ALCM-B force in order to extend its range and increase its survivability?

ANSWER: We are examining several improvements to the ALCM-B with a view towards enhancing its operational capabilites. At the same time, we are also reviewing proposals for an Advanced Cruise Missile (ACM) and we expect to decide soon whether or not it would be wiser to proceed with improvements to the ALCM-B or phase in development of an ACM.

EMP

QUESTION: To what degree does the Strategic Air Command (SAC) consider Electro Magnetic Pulse (EMP) a threat to the survivability of our Command, Control and Communications (C3) network? How does the FY 84 Defense Budget address this problem?

ANSWER: A March 1979 SAC study on strategic connectivity emphasized Electro Magnetic Pulse (EMP) as [deleted]. The study pointed out that the EMP effect on C^3 systems would [deleted].

In light of the study, SAC has taken the initiative on improvements that would reduce vulnerability to EMP. Four programs in the FY 84 Defense budget address the problem: the Ground Wave Emergency Network Program, the Aircraft Alerting Communications EMP Program, the hardening of replacement C^3 equipment on board EC-135 aircraft, and a program to use AFSATCOM to transmit tactical warning and attack assessment data. These programs are designed to provide some near-term EMP hardened connectivity links for communicating warning, attack assessment, decision-making and force direction messages. As strategic C^3 systems are replaced, new systems will be designed to operate in an EMP environment.

REENGINE KC-135 FLEET WITH MIX OF JT3D AND CFM-56 ENGINES

QUESTION: The Congress has added funds, in FY 1982 and FY 1983, to reengine KC-135 tankers with the JT3D engine. The Air Force does not request any funds for this purpose in FY 1984. Do you believe there is merit to continuing the effort to reengine the KC-135 fleet with a mix of JT3D and CFM-56 engines?

ANSWER: We believe there is some merit to continuing efforts to reengine KC-135s with a mix of JT3D and CFM-56 engines. Specifically, if additional funds are provided by Congress, the Air Force will reengine the remaining Air National Guard KC-135s which are not collocated with active duty KC-135s (up to a total of 88 aircraft). This is only an interim solution, but it resolves immediate community relations problems at Guard units located at noise-sensitive urban locations, and provides some performance improvements over the present J57 engine. However, the long-term Air Force reengining solution to the air refueling shortfall is the CFM-56 modernization program.

ADMINISTRATION'S SPACE-BASED LASER PROGRAM

QUESTION: General Gabriel, would you highlight for the committee, the administration's space-based laser program for FY 84?

Are we moving as expeditiously as possible with this effort?

Could substantially more funds be effectively used by the Department of Defense if they were to be added by the Congress to the FY 84 budget?

ANSWER: The purpose of the DOD space-based laser technology program is to provide an informed decision, in the 1980s, on whether to proceed with the validation phase of a laser weapon system. DARPA's TRIAD program provides the major technological development, and requires the majority of the funding. The Deputy and Assistant for Directed Energy Weapons, Under Secretary of Defense Research and Engineering, is responsible for overall guidance of the DOD space laser technology program. The Air Force is responsible for resolving weapon system issues. This response will address only the Air Force part of the program.

The primary effort in FY 84 is obtaining and analyzing vulnerability and hardening data. We will perform tests to determine the difficulty of destroying targets such as aircraft and ballistic missiles. In addition, we will investigate what countermeasures an adversary might take to protect his aircraft and missiles against our space-based laser, and what effect this would have on the required performance of our laser system.

The second major area of effort in FY 84 is system definition. We must determine what assets (surveillance; launch; command, control, and communications) are required for a space-based laser weapon system besides the laser weapon platform.

The third area of investigation in FY 84 is utility. We will begin to develop system requirements and initial operational concepts for the most promising mission. Total costs and cost-effectiveness will be determined for each proposed system.

The fourth major effort in FY 84 is survivability. We must develop means of ensuring the space-based laser system can perform its mission when confronted with active and passive countermeasures.

The Air Force and the other participants in the space-based laser program, the Army and DARPA, believe the current program is a prudent approach for addressing the key technical uncertainties.

We do not believe additional funds are required for the Air Force in FY 84. However, we have slipped our program one year to compensate for the Congressional decision not to approve FY 83 funding.

US VS SOVIET UNION SPACE BASED LASERS

Senator Garn: How would you compare the relative efforts of the United States and the Soviet Union with respect to space-based lasers? Is the U.S. program limited by funding or technological constraints?

ANSWER: We believe the Soviet Union is [deleted] the United States in the development of a space-based high energy laser weapon. This (d) is due to the following three factors:

1. The significantly larger Soviet resource commitment to high

energy lasers as compared to our effort. (Estimated to be up to five times the United States level of effort.)

2. The focus in the Soviet Union on development of (deleted).

3. The apparent willingness of the Soviets to field lower powered systems with reduced capabilities as compared to the multi-magawatt systems being researched in the United States.

There is (deleted). The Soviet effort appears to be (deleted). A (deleted) could conceivably be tested by the Soviets as early as (deleted) they could have a limited space-based high energy laser system (deleted).

The U.S. space-based laser program is in the (d). DARPA is overseeing (deleted). Included are (deleted).

Other relevant technologies such as short wavelength lasers and mirror design and fabrication are also being pursued.

DARPA is responsible for the majority of the technology developments in the DoD space laser program and is best qualified to comment on the funding required for those efforts. The Air Force has adequate funding to resolve the weapon system issues that fall within our responsibility.

AF AGREEMENT WITH NASA

QUESTION: Has the Air Force reached a mutually satisfactory agreement with NASA concerning a re-estimation of DoD costs for the Space Shuttle program? Would you highlight for the Committee the basic elements of any such agreement?

ANSWER: Yes. On 1 Feb 83 the Air Force and NASA signed a new Shuttle pricing agreement which supersedes the 1977 Memorandum of Agreement (MOA) and recognizes cost increases faced by NASA. Shuttle costs per flight can be divided into hardware (materials and services), manpower, and optional (extra cost) services; these are discussed below.

- DoD will pay the same as civil users for materials and services. This would include any hardware expended and refurbishment of items such as external tanks and solid rocket boosters. DoD costs will be increased from $12.2 million per flight (1977 MOA price in FY 75 $) for the first six years of operations to $16.0 million (FY 75 $) for FY 83 and FY 84 and actual costs ($29.8 million, FY 75 $) thereafter.
- DoD's price per launch is tied to that of commercial/civil users and fixed for the same period as commercial/civil programs.
- NASA will fund and operate Kennedy and Johnson Space Centers. DoD will fund and operate Vandenberg and the Consolidated Space Operations Center, and will provide standard range services at both coasts.
- NASA and DoD do not pay each other's manpower costs for standard services. This "trade" in manpower is the fundamental difference between commercial/civil and DoD launch pricing.
- Finally, the agreement defines "standard" and "optional" services; optional services costs will be additive to those listed above.

For FY 83 - FY 88, DoD has funded the increase of about $2 billion required to implement the new agreement. We believe the agreement is fair and equitable, and demonstrates DoD's commitment to the Shuttle.

COST-SHARING FOR CENTAUR PROGRAM

QUESTION: Has the Air Force reached an agreement with NASA concerning cost-sharing for the CENTAUR program? What are the basic elements of this agreement?

ANSWER: In Nov 82, the Air Force and NASA signed a subagreement to the NASA/DoD Memorandum of Understanding on Management and Operation of the Space Transportation System. This agreement provides for the design and development of a common, short, wide-body Centaur upper stage and related support equipment. The Air Force and NASA will equally share development costs (target cost of $269 million) for this common vehicle. Requirements over and above the common design will be funded by the agency having the requirements. In addition to common development and some unique requirements, the Air Force will budget hardware production and operation costs associated with DoD missions.

NASA will budget additional costs for development of the Centaur G-prime, a longer version of the system, needed for their inter-planetary missions. The joint project will result in delivery of two Centaur G-prime vehicles to support NASA launch requirements in 1986 (Galileo and International Solar Polar) and two Centaur G vehicles to support Air Force missions in 1987 and 1988.

Also in accordance with the provisions of the subagreement, a joint project office has been established at NASA Lewis with a NASA project manager and an Air Force deputy project manager.

MISSION TO BE MET BY CENTAUR

QUESTION: Has the Air Force identified which of its missions can be met by the CENTAUR? In the Air Force view, are there mission shortcomings to pursuing the CENTAUR program? How does the Air Force tend to address these shortcomings?

ANSWER: The Air Force has identified three missions which require the increased performance of the Centaur. Two payloads will transition to the Centaur in 1987/1988. The third payload will transition after a design change scheduled for the late 1980's.

The remaining spacecraft programs will continue to use the initial upper stage (IUS) through the early 1990's. When these programs go through block changes, they will transition off the IUS.

The NASA/DOD requirements for the common use Centaur have been completed, and we know of no problem with meeting those requirements.

STATUS REPORT ON B-1B PROGRAM

QUESTION: Would you give us a status report on the B-1B program? Is it still ahead of schedule and under cost? Have economies been achieved in the program, and are any further cost-saving initiatives under consideration by the Air Force?

ANSWER: The B-1B program has been progressing very well. After a year of full scale development (FSD) and production, we are ahead of schedule and within cost.

Program status is very encouraging. Contractor (FSD) efforts range from 20 to 50 percent complete. Further, contracts for the first two production lots have been executed, and Rockwell International is over 20 percent complete in its production effort. The contractors' internal schedules indicate that the first aircraft may fly as much as five months ahead of schedule.

Several vigorous initiatives have been instituted that help to make this excellent performance possible. These include strict change control, streamlined management, and prompt reporting of programmatic issues to the highest levels of the Department of Defense. We are confident that the program will remain within cost and on schedule.

Economies are being achieved in several ways. First, the B-1B baseline configuration uses several subsystems which have already completed RDT&E. The B-52 Offensive Avionics System and the Improved F-16 Forward Looking Radar are examples of this. We also derive substantial logistical benefits from using subsystems already fielded on operational weapon systems because we can take advantage of common support equipment and established supply lines. We are also pursuing additional manufacturing and contracting initiatives, to include multiyear procurement and new production technologies.

In summary, I am confident that the B-1B baseline cost estimate of $20.5 billion (FY 1981$) is achievable as certified by the President to the Congress in January 1982.

IMPROVE RETARGETING CAPABILITIES FOR MINUTEMAN FORCE

QUESTION: Are there steps that can be taken to improve the retargeting capability of our current MINUTEMAN force? If so, are such programs included in the fiscal year 1984 budget request?

ANSWER: Yes, we can improve MINUTEMAN (MM) II retargeting capability, and the required program is in the FY 84 budget. Currently only MM III has remote retargeting. The missile combat crew can change MM IIIs to new target coordinates by using the computer interface between the Launch Control Center and the missile. This normally takes almost [deleted] once the targeting information is received from Strategic Air Command Headquarters.

At present, MM II missiles must be retargeted by a maintenance team dispatched from the operational support base. In a program designed to improve guidance accuracy and logistics supportability (the NS-17 Upgrade Program), the 300 MM II missiles located at Malmstrom AFB, Montana, and Whiteman AFB, Missouri, will be given remote retargeting capability. This will reduce the time required to retarget MM II from the current [deleted]. The program is currently in the engineering phase, with the first production installation scheduled for January 1986.

AIR-LAND BATTLE CONCEPT

QUESTION: Has the Air Force participated in the development of the Air-Land Battle concept? Would you highlight for the Subcommittee the role of the Air Force in executing the Air-Land Battle concept on the battlefield?

ANSWER: The Air Land Battle concept, now Army doctrine, was devised and developed by the Army's Training and Doctrine Command (TRADOC), Ft. Monroe, VA. The Air Force did not participate directly in the development process. However, we are working with the Army to increase joint training and exercising as well as to evaluate the effectiveness of Air Land Battle concepts.

The Air Force role in executing the Air Land Battle concept on the battlefield has continued to be significant. We will continue to support the Army in such areas as intelligence and reconnaissance, close air support, air interdiction and airlift. Moreover, the Air Force has several weapon programs in R&D and procurement which are directed toward more effectively conducting the Air Land Battle. For example, we are working with the Army to define the requirements for a joint missile (JTACMS) which will provide Army and Air Force commanders with an extended-range standoff weapon. We are also working to develop a joint radar system (JSTARS) which will provide commanders with improved information on movements in the battle area.

O&M BUDGET FOR FY 84 VS FY 83

QUESTION: Would you address the concern that has been raised by some that procurement programs are robbing the readiness accounts in the service budgets? How does the Air Force O&M budget for FY 84 compare to the FY 83 budget--is there a decline or increase in the real purchasing power?

ANSWER: Operation and Maintenance (O&M) funding for the Air Force in the FY 84 budget and the outyears properly supports new and existing weapon systems. There is no "magic" ratio of O&M to procurement funding. We systematically identify costs from the inception of a new weapon system through its operational life, and we program resources accordingly for the budget year and outyears. We will continue to review the budget critically to provide a realistic balance between modernization and readiness.

Regarding the second part of your question, the FY 84 real growth in Air Force O&M is six and a half percent over FY 83.

AIR FORCE PROCUREMENT INITIATIVES

QUESTION: Please provide for the record the Air Force procurement initiatives with respect to Multiyear Procurement Programs and Second Source Procurement Programs. What are the anticipated savings that will result from these initiatives?

ANSWER: The Air Force multiyear procurement candidates for fiscal year 1984 are the B-1B aircraft, F-15 aircraft, Communication Nodal Control Element (CNCE) and KC-135 Reengining Program. Estimated savings in then-year dollars for each of these multiyear candidates are shown below:

B-1B	$1,188.2 Million	($800M in FY 81 $)
F-15	399.0 Million	
CNCE	66.0 Million	
KC-135R	329.3 Million	
	$1,982.5 Million	

In addition to on-going second source programs, the Air Force is considering second sourcing initiatives for the following programs: NAVSTAR GPS User Equipment, MILSTAR Terminals, Third Generation Gyroscope and Standard Central Air Data Computer.

Although the introduction of competition generally produces significant savings, developing and qualifying a second source usually require substantial costs which may offset those savings. Reduction of costs is only one of several reasons for establishing additional sources. For example, we may be able to achieve superior equipment by introducing technical competition and expand the production base for mobilization. Only after a cost/benefit analysis is completed can a decision be made on whether to pursue second sourcing.

AF TAC AIRCRAFT PROGRAMS

QUESTION: Are the Air Force TAC aircraft programs funded at efficient rates of production in the FY 84 budget? If not, please provide a list of those programs which are funded at less than efficient rates, and what additional funds would be necessary to bring production up to efficient rates.

ANSWER: Due to fiscal constraints we have funded the F-15 at less than an efficient production rate in FY 84. However, the quantities of

F-15 and F-16 aircraft projected for the next five years in the President's FY 84 Budget represent efficient production rates.

OVERVIEW OF IMPROVEMENTS

QUESTION: Please provide for the record an overview of the improvements the Air Force has made over the past few years given the increased Defense budgets. Specifically address the areas of personnel, readiness and force modernization.

ANSWER: Over the past few years we have substantially improved our posture — particularly in attracting and retaining high quality people and in improving combat readiness. The effects of our force modernization efforts will show up more gradually because of the long-lead times required to introduce new equipment.

We've made major improvements in recruiting and retention of personnel. The 14.3% pay raise in FY 82, plus increased reenlistment bonuses and cost-of-living allowances for unaccompanied military members stationed overseas, contributed significantly to a more fully manned, high-calibre force. The rate of high school diploma graduates has risen from 83% in FY 80 to 94% in FY 82 while the Mental Category I & II rate has improved from 39% to 44% over the same period. We increased our prior service accessions by over 50% between FY 81 and FY 82, thereby reducing training costs. Last year, we also recorded the highest retention rate in most officer and enlisted categories since the start of the all volunteer force. Fair compensation and improved quality of life for our people are needed to prevent a repeat of the damaging loss of experienced people we suffered in the late 1970s.

Beyond these improvements, we have funded additional spare parts and repair capability for our aircraft to support the peacetime flying-hour program, procured additional war reserve materiel for our forces, and almost doubled munitions procurement over what was previously planned. Our people are flying more, and we're taking advantage of better training opportunities. We have increased the average monthly flying hours per crew from 16.2 in FY 81 to 18.6 in FY 83. Also, we've added more unit deployments which promote readiness by familiarizing aircrews with the bases and environment from which they would operate in wartime. We've also increased technical training to provide improved support for our new weapon systems. A recent C-141 modification, accomplished on schedule and under cost, added cargo space and an aerial refueling capability to the aircraft. That, in conjunction with refueling training for aircrews, has enhanced our ability to respond to worldwide contingencies. Joint exercises such as BRIGHT STAR 82 in Southwest Asia have been valuable in integrating airlift, tactical and strategic forces. Modifications to older systems such as the B-52 and Minuteman have aided our ability to fight today with what we've got.

We are starting to see the results of recent modernization efforts. For example, we have begun major improvements to strengthen our strategic forces. The first eight B-1Bs went into production in 1982. The first squadron of 16 B-52Gs equipped with cruise missiles became operational in December 1982. In addition, we are modernizing the KC-135 with new, more efficient engines. Twelve KC-10s have already been delivered to improve our force projection capability.

In the communications, command and control area, we are developing improved radar and satellite systems to give us early warning and to provide assessment of the size and scope of a Soviet missile attack. Development also has begun on a new satellite communications system, employing extremely-high-frequency channels to allow Presidential orders to be passed more efficiently from command centers to our commanders in the field. We are upgrading E-4B and EC-135 airborne command posts for the National Command Authority (NCA) and key military commanders.

The North American air defense network is being upgraded with over-the-horizon radars and new Distant Early Warning Line radars; F-16s and F-15s will replace aging F-106 interceptors. Moreover, research and development on an operational anti-satellite system and ballistic missile defense have been increased.

We have taken actions to buy an additional 44 KC-10 air refueling tankers and 50 C-5B heavy cargo aircraft to increase our airlift capability, thereby reducing our present deficit in the transport of outsized equipment. We are expanding the Civil Reserve Air Fleet (CRAF) enhancement program to provide added civil carrier assets in time of need. Finally, we have continued RDT&E for a new outsize capable airlifter--the C-17--to meet our longer-term needs. Also, we plan to modernize and expand our Air Force tactical fighter forces by increasing production of the F-15 and F-16 aircraft.

Significant achievements in military space activities include orbiting the first military payload on the Space Shuttle and the creation of the Space Command on September 1, 1982. The Space Command consolidates the management of space activities into a major command and provides an organizational structure to employ space systems effectively throughout the conflict spectrum. We have also set out the doctrinal basis for developing, deploying, and employing space systems.

We have made a good start in strengthening our forces, and we have to keep up the momentum . Rebuilding our capabilities will require continued commitment over the next several years to sustain these positive trends.

PROGRAMS TO OFFSET PROPOSED PAY FREEZE

QUESTION: Are there personnel programs which could be pursued in FY 84 to offset the proposed pay freeze?

ANSWER: Yes. Congress can help offset the FY 84 pay freeze by preserving intact long-standing benefits for our people such as the military retirement, commissary, base exchange, and health care programs. With no pay raise in FY 84, other actions to improve the quality of life for our people will go a long way to ameliorate this situation and will help us attract and retain the high quality talent we need. For example, military personnel and their families are asked to make sacrifices which others do not bear, such as directed PCS moves. An August 1982 Air Force survey revealed that the median out-of-pocket PCS move expenses for a Staff Sergeant were $1120 and for a Captain were $1550. In fact, over half of the Air Force members needed to borrow funds to meet PCS expenses. Congressional help is needed to relieve this burden.

Further, the Department of Defense has developed several specific initiatives in the FY 84 budget which will directly improve the quality of life for military personnel and their families. We hope you will support the following:

- CONUS Temporary Lodging Expense (TLE) - implements a CONUS TLE entitlement of up to 4 days, not to exceed $110 per day, as authorized by the FY 82 Pay Bill. Currently, Federally employed civilians are authorized up to 30 days of reimbursements for these types of expenses. Military members receive no reimbursement within the CONUS for temporary lodging and subsistence.
- Dependent Student Travel - one round trip per year for dependents of members assigned overseas to attend secondary or undergraduate college (provided Federal civilians in 1981).
- Vehicle Storage - store privately owned vehicles during restricted tours to foreign areas with vehicle shipment restrictions (e.g., Japanese emission control embargo -- DOD imposed embargo on US POVs

manufactured after 31 Mar 76 because of strict Japanese emission control standards which require prohibitively expensive modifications/alterations, plus mandatory inspection; upwards of $2,000 in unreimbursed out-of-pocket expenses).

- Second Dislocation Allowance (DLA) - provide members a second DLA when they are forced to relocate the household twice incident to a single PCS.

Unless we continue to take care of our people — pay them fairly and provide the entitlements they have earned and deserve -- we will face serious problems in the future.

QUESTIONS SUBMITTED BY SENATOR McCLURE

SOVIETS VIOLATING SALT II

QUESTION: Last Wednesday, February 23, 1983, President Reagan virtually accused the Soviet Union of violating the SALT II Treaty. Does the Air Force believe that the Soviets are violating SALT II?

ANSWER: Intelligence gathered to date is insufficient to assess whether the Soviets are or are not in violation of SALT II. On October 26, 1982, the Soviets tested a new light ICBM. In accordance with the provisions of the SALT II Treaty, they provided formal notice that this launch was a test of their one authorized, new light ICBM.

[Deleted.]

SALT II allows for missile modernization as long as the number of stages and type of propellant remains the same and the length, largest diameter, launch weight, and throw weight do not differ by more than five percent. [Deleted.]

AF OPPOSITION TO HART AMENDMENT

QUESTION: Did the Air Force oppose the Hart Amendment to the FY 1983 Extended Continuing Resolution, which prohibited our testing the MX ICBM indefinitely in order to comply with the unratified SALT II Treaty? If not, why not?

ANSWER: The Air Force did not support the Hart Amendment to the FY 1983 Extended Continuing Resolution. An extensive delay in MX flight testing would cause an increase in program costs and delay Initial Operational Capability (IOC).

At present, we are restricted from conducting flight testing until Congress has reviewed the President's basing decision. We have, however, maintained a posture that will permit immediate initiation of flight testing once approval has been received.

FUNDING FOR DEACTIVATIONS

QUESTION: What funding is being expended to deactivate the 54 Titan II ICBM's and the 80 B-52 D bombers? Was this funding explicitly authorized and appropriated by Congress? How much funding is saved by these deactivations, in the form of operations and maintenance and modernization funds?

ANSWER: The Air Force is deactivating 53 TITAN II ICBMs (one silo was declared "destroyed" following a September 1980 accident) over a five-year period ending in September 1987. Congressionally approved FY 83 funding recognized the incremental nature of the TITAN II deactivation program and did not differentiate between deactivation costs and costs to operate and maintain those missiles awaiting deactivation. The savings associated with deactivating the TITAN IIs are projected to be $292.4 million for procurement and $84.5 million for operations and maintenance from FY 82 through FY 87. These savings were determined by comparing what the Air Force now intends to spend on TITAN II with what would have been spent if the missiles were to remain fully operational.

No separate funding was identified for the retirement of the B-52D bomber. The savings associated with the B-52D retirement are $191.3 million for FY 83; $378 million for FY 84; $404 million for FY 85; $434 million in FY 86; and $460 million for FY 87.

ARMS CONTROL IMPLICATIONS

QUESTION: Is it true that under the Reagan Administration, the US has unilaterally deactivated a total of 292 strategic delivery vehicles counted in SALT II while the Soviets have added almost 100 strategic delivery vehicles? What are the arms control implications of these US unilateral deactivations?

ANSWER: No. The US has retired some strategic nuclear delivery vehicles, but in most cases we retired these vehicles for reasons other than arms control compliance. For example, forty-four B-52Ds were retired in October 1982, and the remaining thirty-five will be retired in October 1983. They are being taken out of service because they are old, difficult to maintain and expensive to operate. All will be placed in storage. Fifty-three TITAN ICBMs are to be deactivated (one was declared "destroyed" due to an accident): five deactivations are complete and the remainder should be dismantled by 1987. We are dismantling the TITANS for many of the same reasons older B-52s are being taken out of the force, reliability and maintainability. Additionally, ten Polaris submarines (16 tubes each) are to be replaced on a one-for-one basis with TRIDENT.

[Deleted.] By so doing, they have stayed within the limits of SALT I. The Soviets had about 2500 launchers when SALT II was signed in 1979. That Treaty would have required them to dismantle down to 2000, but when the Treaty was not ratified by the US, they did not draw down. Their inventory has remained nearly constant.

The US position in the Strategic Arms Reduction Talks (START) calls for major reductions of nuclear warheads. This position is based on a smaller, but modernized force. So long as the present US modernization programs continue, the above retirements and dismantlements should not adversely affect the US arms control position.

STOCKPILED MINUTEMAN III ICBMS

QUESTION: Does the Air Force plan to deploy 50 or 100 stockpiled Minuteman III ICBMs, which was authorized by Congress in both FY 1981 and 1982? Why not?

ANSWER: The Air Force did plan to replace 50 MINUTEMAN II missiles at Malmstrom AFB, Montana, with 50 MINUTEMAN IIIs. This was to be a two-year program, with site preparation the first year and missile installation the second. Funding was authorized by Congress in FY 1981, but was not appropriated. The program received a $5 million appropriation in FY 1982 and the site preparation was accomplished. However, funding required to complete the effort ($15 million) was deleted by Congress from the FY 1983 budget. The current Air Force position is to retain this program as a future option.

COST TO MODIFY B-52G

QUESTION: How much is being spent to modify B-52 G ALCM carriers to carry strakelets?

ANSWER: The total cost of the strakelet modification for ALCM-carriers is $73.8 million. Procurement of the kits was completed in FY 82; installations should be complete in FY 84.

PAYLOAD OF B-1B

QUESTION: Was the payload of the B-1B bomber reduced by 2 ALCMs from 22 to 20? Why?

ANSWER: No. The B-1B will have the capability to carry 22 cruise missiles (AGM-86B). However, SALT II limits average carriage to 20 cruise missiles and, as stated by the President, we will not undercut this agreement as long as the Soviets also continue to abide by it. The B-1B, when deployed, will be configured in compliance with whatever arms reductions agreements are in effect at that time.

LAUNCH AND THROW-WEIGHT OF MX ICBM

QUESTION: Is the launch and/or throw-weight of the MX ICBM limited by SALT II?

ANSWER: Yes. Any future US ICBM, including MX, could not exceed the SS-19 launch or throw-weight. This is the maximum permitted for the one new light ICBM allowed under SALT II.

MX PAYLOAD

QUESTION: Does SALT II limit MX payload to 10 warheads? How many warheads were planned for the MX in 1973?

ANSWER: Yes, we agreed with the Soviets that we would not flight test or deploy a new ICBM with more than ten reentry vehicles. The number ten was determined by setting a cutoff of May 1, 1979 and then agreeing not to develop new systems with a greater number of reentry vehicles than had been flight tested by that date.

The MX is designed to carry up to 12 reentry vehicles, but we have never planned to flight test or deploy more than ten.

ADDITIONAL COST TO MX PROGRAM

QUESTION: How much will delaying the MX flight-testing under the Hart Amendment, in compliance with Salt II, add to the cost of the MX program?

ANSWER: At present it is difficult to tell because relief from the provisions of the Hart Amendment is contingent upon Congressional approval of a basing mode for Peacekeeper. If approval is granted by early summer, we do not expect the delay in flight testing to cause either a cost increase or a schedule slip although other factors such as the type of basing selected could cause this to happen.

On the other hand, if flight testing were to be delayed until fall, then it would become a driving consideration and we would have to face the possibility of increased schedule risk and possible cost increases.

Concerning your reference to SALT II compliance, Peacekeeper is a "light" ICBM and fully compatible with the Treaty's provisions.

COMPLIANCE WITH SALT I INTERIM AGREEMENT

QUESTION: Is the Air Force still complying with the expired SALT I Interim Agreement on Strategic offensive weapons?

ANSWER: We support the US position not to undercut existing strategic arms agreements, so long as the Soviet Union shows equal restraint.

ABM TREATY

QUESTION: Did the Air Force participate in the decision to reaffirm the SALT I ABM Treaty? What factors lead the Air Force to conclude that the ABM Treaty is still in the US national interest?

ANSWER: The Air Force participated in development of the decision and we support the US statement that no amendments to the Treaty are required at this time. We believe that the Treaty is still in the national interest because, at present, a firm need has not been defined for a ballistic missile defense system. Further, we see no reason to relieve the Soviets from the ABM provisions by abrogating or changing the Treaty.

EFFECT ON US SUPREME NATIONAL INTERESTS

QUESTION: The US SALT I Unilateral Statement of May 9, 1972 stated that a permanent strategic offensive limitation treaty would have to be reached by 1977. It went on to say that if a severe Soviet counterforce threat to the survivability of US strategic forces developed in the meantime, this could constitute grounds for US abrogation of the ABM treaty. Has the Soviet counter threats developed to the point that US ICBM survivability is jeopardized? How does this affect US supreme national interests?

ANSWER: Soviet counterforce capability has developed to the point that survivability of our Minuteman force would be jeopardized if it had to ride out a Soviet ICBM attack. We estimate RVs from the SS-18 Mod 4 and SS-19 Mod 3 have a (d) percent probability of severely damaging Minuteman silos today if one RV is targeted on each silo; the probability is (d) percent if two RVs are targeted on each silo. Projected accuracy improvements for Soviet ICBMs raise these damage probabilities to [deleted] and [deleted] by the end of this decade.

We must proceed now to modernize our ICBMs. If we take no action to strengthen the land-based leg of our TRIAD, it could be read by the Soviets as a sign of weakness and could call into question our commitment to defend our allies. A weakened US strategic TRIAD would reduce the incentive for the Soviets to negotiate reasonable arms control agreements in START. Finally, increased ICBM vulnerability could lead to a situation in which we would be at a distinct disadvantage should a nuclear exchange occur, preventing us from terminating hostilities on terms favorable to the US.

MX DENSE PACK DEPLOYMENT

QUESTION: Describe how MX Dense Pack deployment is consistent with the unratified SALT II Treaty.

ANSWER: Peacekeeper in Closely Spaced Basing is readily verifiable and would involve a limited number of missiles, warheads and launchers. Additionally, Peacekeeper deployment is in keeping with the goal of substantial reductions in strategic arms. Therefore, we believe the system would be compatible with the spirit and intent of existing arms control agreements and with the proposals we are advancing in the START negotiations as well.

SOVIET TEST OF WEAPONS

QUESTION: Have the Soviets tested more weapons above 150 kilotons after 1976 than before?

ANSWER: Because our methods for determining the yields of Soviet underground nuclear tests are so uncertain, we cannot verify that they have conducted any underground nuclear tests above 150 kt since 1976. We estimate [deleted]. Soviet tests with yields above 150 kt since the testing limit went into effect. Between 1963 and 1976, we believe [deleted]. While there have been more Soviet underground tests [deleted] in the period since 1976 compared to the earlier period, the test yields have been significantly smaller.

SOVIET SS-18

QUESTION: Describe the Soviet SS-18 rapid reload/refire capability. How much does this expand Soviet counterforce capability?

ANSWER: The SS-18 cold-launch technique pops the missile out of its canister within the silo, using compressed gas. Once the missile has cleared the silo, first stage ignition occurs. This minimizes damage to the silo interior during launch and facilitates silo refurbishment for reload.

[Deleted.]

SOVIET MOBILE SS-16 ICBMs

QUESTION: Does the Air Force believe that Soviet mobile SS-16 ICBMs are deployed at the Plesetsk test range?

ANSWER: We do not believe mobile SS-16s are operational at the Plesetsk Test Range. [Deleted.]

SOVIET ENCRYPTION

QUESTION: Does Soviet encryption of missile test telemetry at the 80% level impede US verification? At the 95% level? At the 100% level?

ANSWER: Any level of encryption hinders our ability to assess Soviet weapons performance. However, it is misleading to use the level of encryption as a guide for determining how well we can verify what they are doing. More critical is the "nature" of the encryption, that is, what missile test functions are being encrypted and what functions are being transmitted in the clear. [Deleted.]

Both the level and nature of recent Soviet telemetry encryption, whether at the 80 percent or 95 percent level, [deleted] our ability to verify Soviet compliance with SALT II. We have been able to reach [deleted] estimates of launch weight and throw weight for Soviet missiles [deleted]. Our confidence level in the estimates we make could [deleted].

SOVIET PL-4, PL-5 AND SS-NX-20

QUESTION: Describe what is known about the Soviet PL-4, PL-5, and SS-NX-20.

ANSWER: [Deleted.]

SOVIET RESTRAINT TO SALT II COMPLIANCE

QUESTION: Are the Soviets showing any restraint in regard to SALT II compliance?

ANSWER: Cases of what appear to be Soviet restraint can be cited, but it is impossible to determine whether they result from compliance with SALT II limits or other considerations. For example, although total Soviet strategic nuclear delivery vehicles (SNDVs) remain higher (about 2500) than the number permitted under SALT II, the number has been constant since the Treaty was signed in 1979. The Soviets have not constructed new missile silos. We also have no indication that they have [deleted].

The Soviets have dismantled 370 older launchers. They have dismantled 155 ICBM launchers as required by SALT II. They have taken down 215 SLBM launch tubes since 1972. This activity appears to be driven by the numbers set in the SALT I Interim Agreement (62 submarines and 950 SLBMs). Backfire bomber production remains at the same rate that existed in 1979 (per Soviet assurances accompanying the treaty), and they have limited the Backfire's refueling capability [deleted].

SOVIET ACTIONS

QUESTION: What Soviet actions would undercut or defeat the object and purpose of the SALT II Treaty?

ANSWER: The provisions of the SALT II Treaty not only limit strategic offensive arms quantitatively and qualitatively, but also promote restraint in development of new types of strategic offensive arms, enhance verification, and ban circumvention of the provisions of the agreement.

Any actions inconsistent with these provisions could be potential violations; however, we would have to analyze and judge each suspected occurrence on a case-by-case basis before arriving at a determination.

ALCM-B PLANS

QUESTION: How many ALCM-Bs will be produced through FY 1984, when the program is now planned to be zeroed? How many ALCM-Bs did the Carter Administration plan? How many did the Reagan Administration in its November 1982 strategic decision? How long will be the gap between stoppage of ALCM-B production in FY 1984 and beginning of production on a follow-on ALCM? What is the comparative cost between the follow-on ALCM and the ALCM-B? Is this ALCM production gap wise during the window of vulnerability? How much funding is freed up by stopping ALCM-B production for reallocation to ALCM follow-on production?

ANSWER: The total number of ALCM-Bs planned for production through FY 1983 is 1523. No ALCM-B procurement is currently planned for FY 84. The Carter Administration planned to produce 3418 ALCM-Bs to equip the B-52G force. The Reagan Administration increased the planned buy to 4348 to support the B-52G, B-52H and B-1B forces. The current ALCM force structure has been refined to approximately 3000 cruise missiles.

As for the Advanced Cruise Missile (ACM), contractor proposals were received just a short time ago, and while we have not had time yet to examine them fully, costs seem to be higher than originally expected. Consequently, once our evaluation is complete we may request reprogramming of funds in FY 1984 to continue ALCM-B production for at least another year. We're not there yet though and probably won't make our final decision until late April. After a decision has been made, we will be able to provide the detailed information you have requested.

SOVIET DEPLOYMENT OF MX-TYPE WARHEADS

QUESTION: Did the Soviets deploy more MX-type warheads last year alone than the US plans to deploy in the 1987-1989 MX deployment plan? How long have the Soviets been deploying additional warheads at this rate? How many strategic warheads will the Soviets have deployed in 1985 and 1990, compared to the US?

ANSWER: To date the Soviets [deleted] ICBM warheads that are as accurate as those on MX would be. The MX reentry vehicle (RV) will have an accuracy of approximately (d) meters CEP; the most accurate Soviet RVs being deployed today are estimated at (d) meters CEP. Current projections indicate though that the Soviets will achieve accuracy equivalent to MX by the mid to late 1980s.

The Soviets have been deploying their current family of warheads since 1979 on SS-18 Mod 4 and SS-19 Mod 3 ICBMs, and now have approximately (d) RVs capable of accuracy in the (d) meter regime in their operational inventory. Their deployment rate for these RVs: [deleted].

FLIGHT TEST OF ICBMs IAW SALT II

QUESTION: How many new type Soviet ICBMs can be flight-tested under the Air Force's interpretation of SALT II's Article IV?

ANSWER: The provisions of Article IV, with its associated Agreed Statements and Common Understandings, are intended to limit both parties to flight testing and deployment of one new type of light ICBM.

SOVIET NEW TYPE ICBM

QUESTION: How many new type ICBM's does the Soviet Union now have in preparation for flight-tests? How many modifications of existing ICBM variants?

ANSWER: [Deleted].

IOC OF SOVIET BLACKJACK BOMBER

QUESTION: When will the new Soviet Blackjack bomber reach IOC?

ANSWER: The new Soviet Blackjack bomber will reach IOC in 1986 or 1987, if the development program proceeds at the pace we have estimated.

TU-95 BEAR

QUESTION: How many new variants of the TU-95 Bear equipped with long-range ALCMs can be produced? Can these be distinguished from the TU-95 Bears being flown regularly to Cuba?

ANSWER: One new variant of the TU-95/BEAR has recently been identified [deleted]. Although we only know of (d) aircraft of this type, the estimated production rate is [deleted]. The modifications are subtle, but this variant is distinguishable from other BEAR variants.

ALERT RATE OF B-52 FORCE

QUESTION: Has the alert rate of the B-52 force been reduced from 33% to only 26% due to the assumption of a new mission—the Strategic Projection Force?

ANSWER: No. The Strategic Projection Force does not degrade the B-52 alert rate of 30%.

SALT II CEILINGS

QUESTION: When will the Soviets go beyond the following SALT II ceilings: 820 ICBMs, 1200 MIRVed missiles, 1320 MIRVed missiles and ALCM-equipped bombers?

ANSWER: We do not know whether or not the Soviets will exceed the SALT II ceilings on MIRVed systems. However, if they elect to proceed at the current rate of construction, modernization, and deployment, [deleted]. The timing would depend on the thrust of some of their weapons programs. For example, the Soviets are [deleted]. Thus for SALT II purposes, we judge they have [deleted] though the actual number today is less. When their [deleted].

In other areas, the number of MIRVed SLBMs is paced by the construction of Delta III and Typhoon submarines. The present construction rate will not allow them to reach the 380 MIRVed SLBMs (for a total of 1200 SLBMs and ICBMs) they are permitted until the [deleted]. The same is true of ALCM-equipped bombers; it will take about [deleted] for the Soviets to deploy the 120 ALCM carriers allowed (for a total of 1320 MIRVed missiles and ALCM bombers). The one area in which MIRVed limits could be reached sooner is a mobile ICBM [deleted] they could exceed the MIRVed ICBM ceiling in the [deleted]. All of these limits could be exceeded earlier should the Soviets increase the pace of their modernization efforts.

MX MISSILE PROGRAM

QUESTION: The MX Missile Program continues to be troubled. While we all hope the President's Commission will produce workable recommendations for basing the missile, there is a substantial chance the program will be terminated by Congressional action this year. Can you explain, in simple terms, why we should preserve the strategic TRIAD of land-based bombers, ICBM's and submarine launched ballistic missiles?

QUESTION: Can the TRIDENT II provide an effective substitute for the M-X? (Address issues of prompt hard target capability, arms control, IOC, retargeting flexibility, command and control responsiveness, and deterrence implications of a DYAD vs TRIAD).

QUESTION: In its analysis, "Reducing the Deficit," the Congressional Budget Office recommends the cancellation of the M-X missile and reliance instead on the TRIDENT II missile. In part, CBO bases its analysis on the following:

"Under Administration plans, the primary capability against hardened targets in the future would be provided not by M-X, but by the TRIDENT II (D-5) SLBM and the upgraded bomber force."

Does CBO give adequate attention to the significance between a prompt hard target capability and a hard target capability? What are the implications for cancelling the M-X?

ANSWER: While the TRIDENT II/D-5 program shows promise for enhancing the effectiveness of our SLBM forces, it should not be considered a substitute for modernizing our land-based ICBMs. If this were to be done, we would, in effect, move toward a DYAD of strategic forces. Doing this would have very serious implications for maintaining our nuclear deterrent posture.

Our TRIAD of strategic forces works — it is a very effective deterrent — because it has unique and mutually reinforcing characteristics that could not have been obtained had we chosen to rely on only one or even two types of systems. First, it provides insurance. Should a problem make one part less effective -- the current vulnerability of Minuteman missiles is such a problem -- then the other "legs" of the TRIAD can fill the gap and ensure that deterrence is maintained until the problem can be fixed. The TRIAD also taxes the enemy's economic and technological strength and prevents him from concentrating his resources. If we had a force composed only of bombers and SLBMs for example, the Soviets could focus their resources on defeating these two types of systems, perhaps rendering our deterrent ineffective. Finally, the TRIAD complicates Soviet attack planning because three different problems must be dealt with instead of just one or two. Timing and coordination alone are very difficult when faced with three separate forces operating on land, at sea, and in the air. There is little chance that all three TRIAD legs could be knocked out at the same time no matter how well planned and executed the attack.

In addition to their combined and complementary effects, each element of the TRIAD has distinct advantages. Bombers are the most flexible element. They can be launched, redirected, recalled, and used again. They can be used in a variety of ways, including attacking imprecisely located targets, conventional operations, and sea lane control. Missile carrying submarines contribute survivability and endurance. Land-based ICBMs as well are an essential part of our deterrent capability and have unique qualities that they alone can provide.

One of the most important ICBM qualities is sovereign basing. To attack our land-based ICBMs, the Soviets must at the same time make the decision to attack the United States. This keeps the threshold of deterrence high. In attacking U.S. territory, the Soviets could harbor no doubt that we would retaliate.

The second advantage resides in the characteristics ICBMs have as weapons. They are responsive, have prompt hard-target capability (can reach their targets in about 30 minutes), have high peacetime alert rates, excellent command and control and the lowest operating costs of any TRIAD leg. They complement bombers, which take several hours to reach their targets, and SLBMs, which cannot react as promptly.

The third advantage falls into the area of Soviet perceptions. The Soviets have invested heavily in ICBMs, and 75 percent of their nuclear strength resides in their strategic missile forces. Our ICBMs can get to Soviet targets quickly and disrupt their ability to execute, control, and pace an attack on us. This bolsters the psychological aspects of deterrence. It keeps the Soviets from gaining an advantage early in a conflict, and denies them the opportunity to blackmail us immediately following an initial attack.

Finally, modernizing our ICBM forces sends a strong message to the world that we mean business. It shows our allies that we can make the really hard decisions -- decisions similar to those we have asked them to make in modernizing the intermediate range nuclear forces. It also shows the Soviets that we intend to bargain in the START talks from a position of strength. This is vital in negotiating equitable agreements to reduce strategic arms, as our past dealings with the Soviets illustrate.

Failure to maintain strong, diverse, and balanced strategic forces would seriously diminish our capability to retaliate and thus undercut our ability to deter. Recent and on-going modernization initiatives have allowed the Soviets to increase both the deterrent value and warfighting capability of their strategic forces. If we abandon any element of our TRIAD, we will foster the perception, if not the reality, that the Soviets have gained nuclear capability well beyond that of the United States.

Turning now to the ability of Trident II to pick up the mission of a land-based ICBM, we have some concerns. First, the hard target capability of the D-5 is not yet assured. Its accuracy will rely on sophisticated components that are at the very leading edge of today's technology. Even if the necessary accuracy were to be achieved, it would be at least ten years before the D-5 can be deployed in sufficient numbers to retaliate against the Soviet hard target base.

Second, we also cannot be assured that the TRIDENT II/D-5 system would have the timely command and control necessary for retaliation against specific targets during an enemy attack. Promptness is crucial to the U.S. objectives of escalation control, damage limitation and achieving early termination of a conflict short of total nuclear exchange. Land-based ICBMs with their hard target capability, direct connectivity, near-instantaneous retargeting and short flight times are the keystone of our prompt counter-military capability.

Finally, the same characteristics that enhance submarine survivability (i.e., large patrol area and underwater operation) detract from their responsiveness, and limit timely feedback of information.

While SLBMs will continue to provide a strong contribution to the TRIAD for the foreseeable future, they should not be viewed as a substitute for ICBMs. A DYAD would lack the resiliency of our current TRIAD and allow the Soviets to concentrate their efforts on defeating the remaining two elements of our strategic forces. A balanced strategic modernization program for all three legs of the TRIAD is needed now to ensure continued deterrence, provide a hedge against Soviet technological breakthroughs, and give the Soviets an incentive to continue serious arms control negotiations.

QUESTIONS SUBMITTED BY SENATOR KASTEN

HIGH TECH WEAPONS VS TACTICAL INNOVATION

QUESTION: How do you respond to critics who suggest that the AF is buying weapons that are unnecessarily sophisticated: that for instance the AF could do the job of maintaining air superiority with fewer F-15's and more F-16's, or even with modified F-4's? Some of the so-called military reformers suggest that the AF attempts to solve tactical problems through technology. They claim that it was tactical innovation and not technology that accounted for the great success of the Israeli AF last summer. They say this is confirmed by the fact that most kills of Syrian aircraft were accomplished by F-16's and not by the more sophisticated F-15's. How do you respond?

ANSWER: The air battles over Lebanon clearly show that the F-15s and F-16s and the air-to-air missiles we employ -- AIM-7F and AIM-9L -- are very effective and reliable. This conflict demonstrated that technology, training, and innovative tactics together are the keys to success in combat.

[Deleted.]

The results in Lebanon cannot be used as a model for future U.S. force structure plans. This battle was a low altitude, high-speed fighter engagement conducted in day-clear weather conditions, and visual identification was used. In Central Europe we might encounter massed raids of fighters, bombers, and jammers. These aircraft could penetrate at low altitude, between cloud layers -- or even at night. To meet the wide spectrum of combat conditions we can expect to encounter, a mix of weapons is necessary. Radar missiles provide a first-shot capability and permit us to engage and destroy enemy aircraft in adverse weather, at night, and at long range: the IR missiles and guns are effective for close-in fighting. We need all of these weapons to retain tactical flexibility, to have the ability to fight in anticipated combat conditions, and most important, to retain our edge over a growing, sophisticated threat.

F100 MULTI-YEAR PROPOSAL

QUESTION: Mr. Secretary, do you anticipate any defense contractor will offer another multi-year proposal for the scheduled competition?

ANSWER: Yes. Since the request for proposal (RFP) solicits annual, three-year multiyear and five-year multiyear options, we fully expect to get two outstanding proposals to satisfy our engine requirements.

QUESTIONS SUBMITTED BY SENATOR D'AMATO

U.S. SMALL MOBILE ICBM

QUESTION: If the MX program is terminated, how fast could the Air Force develop the so-called Small Intercontinental Ballistic Missile, or SICM? Second, how long would it take the U.S. to develop a new small mobile ICBM? What is the date of its earliest IOC?

ANSWER: Approximately seven years would be required to develop a new, small intercontinental ballistic missile after entering full scale development. This estimate is based upon past experience in the research, development, and testing of ballistic missile systems.

It is also possible that additional time could be required to develop guidance and other subsystems required to achieve the demanding performance goals that would be necessary for such a system to be effective against planned targets. A tamper resistant warhead would also be required for deploying such a missile in a mobile configuration on public highways. It is anticipated that such a warhead could be available to support an IOC in the 1991-1992 timeframe.

DEFENSIVE/OFFENSIVE PLANNING

QUESTION: Again, in simple terms, how would a US decision to rely on a diad of bombers and submarine launched ballistic missiles simplify Soviet strategic defensive planning and offensive planning?

ANSWER: Our TRIAD complicates Soviet defensive planning because three different problems must be dealt with instead of just one or two. Bombers, SLBMs and ICBMs travel over different avenues of approach and use different tactics in attacking their targets, thereby vastly complicating the deployment of defensive systems of even limited capability. This enhances deterrence and reduces the chance of nuclear war.

From an offensive point of view, the Soviets must be concerned with the large day-to-day, time urgent nuclear response capability provided by our ICBM forces. Without these forces in our arsenal, they could find it more attractive to launch a surprise attack since it would be in their interest not to allow our bomber and submarine forces — only a portion of which are on alert — to generate.

Our ICBMs can get to their targets quickly and disrupt the Soviets' ability to execute and control an attack on us. This prompt response capability prevents the Soviets from gaining an advantage early in a conflict and denies them the opportunity for blackmail.

Failure to maintain a strong, diverse and balanced TRIAD would foster the perception, if not the reality, of Soviet nuclear superiority. Further, it would allow them to concentrate their resources, giving them a much better chance of overcoming the remaining two components of the TRIAD. The stakes are simply too high to let this happen.

TIME URGENT HARD TARGET KILL CAPABILITY

QUESTION: Why is it important for the United States to have a time urgent hard target kill capability?

ANSWER: By getting to their targets quickly, our ICBMs can disrupt the Soviets' ability to execute, control and pace an attack on us. This bolsters deterrence by keeping them from gaining an advantage early in a conflict, and denies them the opportunity to blackmail us immediately following an initial attack before our bombers have reached their targets. The prompt capability that is resident in our ICBM forces provides the only sure way of doing this.

PRESENT MINUTEMAN FORCE CAPABILITY

QUESTION: In your opinion, is our present MINUTEMAN force capable of killing the range of hard targets we know exists now in the Soviet Union with an acceptably high probability of success?

ANSWER: Although the present MINUTEMAN force would be effective against some types of hard targets, the Soviets are substantially increasing the hardness of their ICBM silos, command and control nodes, and leadership elements. As a result, these targets are becoming sufficiently hard to reduce the probability of damage from a MINUTEMAN III (MK 12A) to approximately (d.) Damage probabilities this low provide little assurance that targets being attacked will be destroyed.

At the same time, the most visible and destabilizing aspect of Soviet strategic force modernization has been their emphasis on accuracy improvement and payload fractionation (MIRVing) for their ICBMs. These improvements will soon give them the capability to attack and destroy our MINUTEMAN missiles using only about one-fourth of their ICBM inventory.

The President's plan to modernize our strategic forces is designed to correct these deficiencies. By 1990, if kept on track, the program should roughly double the number of strategic weapons that could retaliate after a Soviet first strike. We will significantly improve our ability to destroy Soviet hardened targets with our ICBMs and SLBMs, and we will also enhance our ability to penetrate their defenses and attack key targets with our bomber and cruise missile forces. Additionally, we will be better able to communicate with our forces during and after an attack.

SOVIET RELOADING OF ICBM SILOS

QUESTION: There have been published reports that the Soviet Union has the capability of reloading its ICBM silos after launching an initial missile salvo. What effect, in your opinion, would it have on the conduct of a war if the Soviet Union could be confident it could reload its ICBM silos?

ANSWER: The Soviets have contingency plans for reloading and refiring from silos which have been used to launch an initial salvo. Over (d) of their ICBMs are in launch canisters within their silos. These canisters help to protect the surrounding silo and its equipment when the missiles are fired, permitting the silos to be refurbished for subsequent use on a much faster schedule than would be possible if canisters were not used. Further, the Soviets employ a cold-launch technique for the SS-17 and SS-18. Here the missile pops out of its cannisters, using compressed gas, and the rocket motor is not fired until it has cleared the silo. By using cannisters and the cold-launch technique the Soviets are able to minimize damage to their silos and facilitate reload.

Additionally, the Soviets have [deleted]. However, it would probably take a few days to refurbish and reload an individual silo, and reloading a significant fraction of the ICBM force might take up to several weeks.

Reload capability gives Soviet leaders the option of conducting nuclear strikes over an extended period, following the outbreak of nuclear war. [Deleted.]

IOC FOR NEW ICBM

QUESTION: The M-X is scheduled for deployment beginning in 1986. Based upon the development time for a new ICBM, how many more years would the "window of vulnerability" remain open?

ANSWER: The IOC of a new ICBM (e.g. small road mobile) would not be until the early 1990's.

IMPACT OF TERMINATING MX

QUESTION: Would you care to comment on the impact a termination of the MX program would have on our arms negotiations with the Soviet Union?

ANSWER: The US START proposal assumes fully modernized forces at significantly reduced levels. In determining ballistic missile and ballistic missile warhead limits for the proposal, MX was an integral part of the modernized force required to maintain a balanced and capable deterrent. If MX were to be terminated, the proposal would have to be restructured accordingly. The termination of MX would also reduce the incentive for the Soviet Union to engage in continued meaningful negotiations.

IMPACT OF MX TERMINATION ON WESTERN ALLIANCE

QUESTION: What impact do you think a decision to terminate MX would have on the Western Alliance as a whole and on the readiness of the Allies to go forward with the scheduled PERSHING II and GLCM deployments in Europe?

ANSWER: [Deleted.]

REQUIREMENT FOR TIME URGENT HARD TARGET KILL CAPABILITY

QUESTION: Since we have a requirement for a time urgent hard target kill capability, if the MX were terminated, the only other system with that capability is the TRIDENT II, or D-5. That system will depend upon two space platforms for its time urgent hard target kill capability: NAVSTAR-GPS and some yet-to-be determined platform for Blue-Green Laser. If development of TRIDENT II were accelerated, what impact would that have on NAVSTAR?

ANSWER: The time urgent, hard target kill capability planned for the TRIDENT II (D-5) Strategic Weapons System (SWS), will be achieved by optimizing the TRIDENT II (D-5) SLBM for accuracy, and increasing the yield of each warhead delivered on target over that of other deployed SLBM systems (i.e. POSEIDON (C-3) and TRIDENT I (C-4) SWS). The accuracy of the new missile will not depend on NAVSTAR-GPS or other planned system based on laser technology. NAVSTAR-GPS will be used for TRIDENT II (D-5) flight tests to provide insight into the weapons system error contributors, and therefore provide a better understanding of system accuracy. In any case, the IOC for TRIDENT I (D-5) SWS is December 1989 and it cannot be accelerated.

BLUE-GREEN LASER

Question: In an unclassified response, can you say anything about the Blue-Green Laser Platform?

Answer: Yes, the DARPA-Navy Blue-Green Laser Communications (BGLC) development program, also known as the Submarine Laser Communications (SLC), offers one of two approaches to communicate with deeply submerged submarines, the other being Extremely Low Frequency Communications (ELF). To date, there are no systems capable of communicating with submerged submarines without the use of a mast periscope, trailing wire or a towed bouy antenna.

Lasers operating in the blue-green portion of the spectrum can transmit signals to submarines at projected depths up to hundreds of feet into sea water, given the proper meteorological and hydrological conditions. Although limited blue-green laser experiments have occurred, the associated high-risk, high-cost technology cannot provide a satellite operational capability until the late 1990's. As a result, the near-term blue-green program has also investigated small area, short-ranged, tactical applications using an aircraft mounted laser, with a lower power airborne laser experiment planned for FY 84 and 85.

The Department of Defense position is that no big-dollar decisions on a satellite system should be made until the feasibility of space-laser lifetime and power levels and power capabilities have been resolved. Current blue-green research indicates such a satellite system will be a low data rate system because the need for covertness will force it to sweep large areas reducing the reception time available per submarine.

The Defense Advanced Research Projects Agency (DARPA) has the lead in the Submarine Laser Communications Systems since it is in exploratory development, far term technology.

ACCELERATE TRIDENT

QUESTION: Given Soviet anti-satellite capabilities, do you believe a decision to accelerate TRIDENT II, a system which is dependent upon two space-based platforms, will have any impact on your space defense efforts? If so, what impact?

ANSWER: The TRIDENT II (D-5) Strategic Weapons System (SWS) is not dependent on two space-based platforms. The TRIDENT II (D-5) system will depend, in part, for pre-launch navigation accuracy on the Transit Navigation System, a network of satellites in polar orbit, which has been operational since the mid-1960s. When the NAVSTAR-GPS system becomes operational, the TRIDENT submarines will be able to obtain navigational position information from that system as a replacement for the Transit system. Satellite navigation systems are only one of several means by which a patrolling submarine determines its geographic position. A yet to be deployed blue-green laser system could be used to send communications to submerged submarines in parallel with other communications means such as Very Low Frequency and Extremely Low Frequency radio. The TRIDENT II (D-5) system is not dependent upon the development and deployment of the laser system.

The IOC of the TRIDENT II (D-5) missile cannot be accelerated. For that reason, and as explained above, there is no impact linkage between these several defense programs.

REVIEW PLANNING AND BUDGETING

QUESTION: If a decision to terminate MX is made, and TRIDENT II is accelerated, will you review your planning and budgeting for space operations and indicate to this committee your estimates concerning the scope and impact of the changes which would be required?

ANSWER: The IOC of the TRIDENT II (D-5) Strategic Weapon Systems (SWS) cannot be accelerated. The mid-1982 Navy decision against advancing the IOC by a year or more was irreversible.

ROLE FOR MX AS BOOSTER

QUESTION: Do you see a role for the MX as a booster to provide the U.S. with a quick-reaction-to-orbit capability if the MX is terminated as an ICBM?

ANSWER: No. If Peacekeeper were terminated before deployment as an ICBM, I doubt that the test program or the manufacturing capability would support production as a booster for other missions. After a substantial deployment, however, the production capability might prove useful for other missions.

SINGLE CONTRACTOR FOR NGT

QUESTION: Last year, the Air Force chose a single contractor as the winner of its Next Generation Trainer Competition. The Air Force has designated this new trainer the T-46A, and is requesting $5.8 million in procurement funds and $123.5 million in RDT&E funds for the program. Is the Air Force satisfied it made the correct decision on this program?

ANSWER: Yes. We used the competitive process to choose the T-46A contractor and selected the best offer.

NEED FOR NGT

QUESTION: Is the need for this trainer still there?

ANSWER: Yes. We need to replace the aging T-37 as quickly as possible. The T-37, introduced in the 1950s, is fast approaching the end of its service life. In addition to being old and difficult to maintain, the T-37 has several operational deficiencies. Major shortcomings include inadequate performance, excessive fuel consumption, poor cockpit environmental control, and outdated communication and navigational instrumentation. These deficiencies must be corrected to provide suitable training for our future pilots.

By incorporating many technological improvements that have been made since the T-37 was introduced, the T-46A will give us the improved capabilities we need while reducing operational and maintenance costs. The T-46A program will give us a fleet large enough to support our future training requirements and provide considerably better traning.

DEVELOPMENT OF DERIVATIVE OF NGT

QUESTION: Has the Air Force been exploring the possibility of developing any derivatives of this aircraft?

ANSWER: The Air Force has not yet formally explored the possibility of developing a derivative of this aircraft. At this time, the Air Force is buying the T-46 specifically as a primary trainer for Undergraduate Pilot Training.

FMS POTENTIAL FOR NGT

QUESTION: Has the Air Force begun activities to enhance the Foreign Military Sales potential for this aircraft?

ANSWER: Section 515(F) of the Foreign Assistance Act and a policy directive by the Secretary of State bar us from encouraging, promoting, or influencing the purchase of U.S.-made military equipment like the NGT unless specifically instructed to do so by an appropriate official of the executive branch. We have not received such instructions concerning the NGT; therefore, no action has been taken.

MAJOR AIR FORCE PRIORITY

QUESTION: U.S. Air Force fighter combat operations depend for much of their success upon the ability of our fighter pilots to talk to each other by radio. The Soviet Union realizes this, and practices a coordination form of electronic warfare they call Radio Electronic Combat. A portion of their radio electronic combat doctrine involves the use of powerful, specialized radio transmitters broadcasting on the frequencies our pilots use in order to jam their transmissions. Our attempts to provide our pilots with jam-resistant radio communications have been subject to intense discussion and repeated redirection. Is the development and procurement of radio equipment with a high capability to resist enemy jamming still a major Air Force priority?

ANSWER: Yes. Development and procurement of a highly capable anti-jam radio to replace current systems is the most urgent communications research, development, and acquisition priority of the Tactical Air Force (TAF) commanders. Because advanced Soviet jammers are expected to be fielded in the near future, our current system (HAVE QUICK) needs to be replaced in the mid- to late-1980s by a more robust capability. Our high-priority HAVE CLEAR program is needed to operate against the long-term Soviet jamming threat.

EFFORTS IN JAM-RESISTANT RADIO COMMUNICATIONS AREA

QUESTION: Can you describe your efforts in this area?

QUESTION: What significant actions do you have planned in this area for fiscal year 1984?

ANSWER: Our efforts in jam-resistant radio communications fall into five areas:

First, we are fielding HAVE QUICK, which provides near-term jam-resistant voice communications in the military UHF band of 225-400 MHz. Over 4000 HAVE QUICK radios have been delivered to date out of a total requirement for about 7000.

Second, we have reprogrammed $2.7 million in FY 82 and FY 83 funds to start HAVE QUICK II. In this program, we are examining the vulnerabilities of HAVE QUICK and assessing low cost improvements to this system.

Third, we are participating with the Army in the jam-resistant VHF voice/data communications program called Single Integrated Channel Ground-Air Radio System (SINCGARS). The Army is developing a new SINCGARS ground radio, and we are taking the lead to develop modifications to the existing ARC-186 VHF AM/FM radios in order to make it jam-resistant and compatible with the Army's ground SINCGARS.

Fourth, we are continuing the Joint Tactical Information Distribution System (JTIDS) program to provide jam-resistant data communications and a limited voice capacity in the Lx-band. We are installing JTIDS in our command and control platforms today and are developing further applications.

Finally, we plan to restart the full scale development of our long-term, highly jam-resistant voice communication system called HAVE CLEAR. HAVE CLEAR will operate in an alternate frequency band and employ a JTIDS-like waveform. We plan to initiate full scale development of HAVE CLEAR this year and anticipate that an OSD Defense System Acquisition Review Council (DSARC) Milestone II review will be conducted in the summer of 1984.

QUESTIONS SUBMITTED BY SENATOR PROXMIRE

KC-135 REENGINING PROGRAM

QUESTION: Mr. Secretary, what is the status of the KC-135 reengining program in this years budget and do you know if the plans for last year providing for JT3D engines for Milwaukee's National Guard unit are going forth on time?

ANSWER: We are proceeding with the JT3D reengining for 28 additional KC-135s in the FY 83 budget per Congressional direction. The plan for providing the Milwaukee National Guard unit with JT3D reengined aircraft is being accomplished on time with the last aircraft scheduled for delivery in July 1983.

KC-135

QUESTION: Mr. Secretary, if I may ask you two more state related questions that perhaps you could look into and provide information for the record. First I would be interested in knowing the prospects for increasing the Madison A-10 unit to an authorized level of 24 aircraft plus appropriate manning. Second, could you provide me any information about the possibility of adding an additional alert line at the KC-135 Milwaukee force and going to a unit equipped level there of 12?

ANSWER: The facilities at Madison can support an authorized level of 24 aircraft; however, this would require additional manpower and O&M funds. At this time, there are no plans to increase the size of this unit.

With reference to the Milwaukee KC-135 force, it would be possible to increase the number of Primary Aircraft Assigned (PAA) at Gen Mitchell Field, Milwaukee, WI, to 12 with a corresponding increase of one alert line. There would, however, be a cost associated with this change--both financial and operational. Due to the physical constraints at Gen Mitchell Field, approximately $500,000 of minor construction would be required.

The physical limits of the Guard ramp at Milwaukee place serious operational restrictions on movement and placement of additional aircraft. In addition, there would be a recurring personnel expense associated with the required increase in crews and maintenance. Because of the time intensive nature of the alert commitment and the expense of KC-135 flying hours, the recurring costs for the Guard are very similar to those of active duty forces doing the same job.

B-1 BOMBER

QUESTION: The FY 84 budget provides for a 30 percent real growth in the area of strategic forces. Most of this cost increase is caused by the MX and the B-1. It has been charged by some that the B-1 is unnecessary since it will be superseded by the "Stealth" bomber. The AF response is that the stealth will not be operational for some time and the B-52 no longer has penetration capability, and that therefore we are really without the bomber leg of the strategic triad. Has this situation been altered by the development of a stealth capability for the cruise missiles, as has been reported in the aviation technology journals? Is it possible to cancel the B-1 and count on improved B-52's with stealth cruise missiles, while at the same time speeding up development of the stealth bomber? First, and most importantly, how would this affect our strategic capability, and secondly how would it affect the AF budget?

ANSWER: President Reagan's plan for revitalizing our strategic forces was developed with full recognition of DoD's extensive work on the application of low observables technology to a variety of military vehicles including cruise missiles and bomber aircraft. To date, nothing new has happened that would cause these plans to change.

In recent days, concern has been generated over the absence of production funding for the ALCM-B in the FY 1984 budget. Some believe that this was done because of a change in the threat or because "stealth" technology could be applied to cruise missiles earlier than we had previously thought possible.

Neither of these premises is correct. The number of ALCMs we can deploy is constrained by the number of cruise missile carrying aircraft. We would like those missiles to be as good as we can make them. Consequently, it would be to our advantage if we can get a product with characteristics that would guard against possible Soviet advances, at a reasonable price. Within this context, we solicited industry proposals for an Advanced Cruise Missile (ACM), and they were received a short time ago. We haven't had time to fully examine them yet, but an initial look has found that costs are higher than we originally expected. Once our examination has been completed, there is an excellent chance that we may decide to request reprogramming of funds in FY 1984 to continue ALCM-B production for at least another year.

To sum up, the President's plans to deploy the B-1B and subsequently the ATB remain unchanged. Developing a major weapons system (like the ATB) requires an average of ten years. In addition to this basic work, the ATB requires advances in several areas of great uncertainty. Acquiring the B-1B while continuing to pursue the ATB is the most prudent approach for revitalizing our bomber force. It puts improved capability on the ramp with initial operational capability in 1986 and at the same time provides for the orderly development of the ATB, thus capitalizing on this important technology and avoiding costly major redesigns that would be likely if the program were paced too rapidly.

Finally, while cancelling the B-1B could reduce the Air Force budget, it would do so at the cost of delaying modernization of our bombers, and would foster a perception that we lack resolve to deter a real and growing threat. Air-launched cruise missiles alone are not sufficient to attack effectively the range of Soviet targets we must be able to cover. Our strategic forces can be effective only if they have the flexibility to place at risk a wide variety of targets, including those of imprecise location. A combined force of B-52s, B-1Bs, ATBs and cruise missiles will place maximum stress on Soviet air defenses and provide excellent means for attacking preplanned and fixed targets, as well as mobile or imprecisely located targets. In addition, a modernized strategic bomber force will contribute significantly to a firm foundation from which the United States can pursue negotiations with the Soviet Union to achieve meaningful and verifiable arms reductions.

MX VS SMALL MOBILE STRATEGIC MISSILE

QUESTION: The MX has been beset by numerous problems not the least of which has been the failure to find a suitable basing mode. A former presidential advisor (Bill Van Cleave) has suggested scrapping the MX as it has evolved: a behemoth whose design was driven more by the imperatives of arms control and engineering than by considerations of survivability and strategy. Instead he would have the AF deploy a large number of small, mobile missiles with a single warhead, using present technology. What is your response to this?

ANSWER: The proposal you mention is presently being considered along with many others by the President's Commission on Strategic Forces. While we cannot speculate on the Commission's recommendations, there are advantages to deploying a large missile like Peacekeeper. First, Peacekeeper can be made available much sooner than a small mobile missile. Peacekeeper could be ready for deployment by the mid-1980s, while a small missile system could not be fielded until the early 1990s. This extended delay would continue to widen the gap between Soviet and U.S. ICBM capabilities, worsening the growing imbalance and reducing arms control leverage.

Secondly, it takes many more small, single warhead missiles to achieve capability equivalent to a single large MIRVed missile. For example, it would take 1000 small missiles to do the job of 100 Peacekeepers. Consequently, there would be a considerable cost factor to be reckoned with that would result from having to deploy more missiles and associated basing facilities, support equipment and manpower to achieve similar capability.

MX AND BMD

QUESTION: If the MX were to be retained, and the so-called dense pack basing procedure with it, would its survivability, and hence its deterrent effect, be enhanced by the deployment of a ballistic missile defense (BMD)? What is the AF position of BMD (even though it is presently an Army program)?

ANSWER: Survivability of M-X in Closely Spaced Basing (CBS) would be enhanced by the deployment of an effective ballistic missile defense (BMD) system. This is one of a variety of steps that could be taken to improve CSB effectiveness in the long term should the Soviets deploy forces that could threaten M-X in CSB. The Air Force believes that M-X in CSB is survivable without a BMD against the current and projected threat. However, the BMD option should be protected through a vigorous R&D effort in the near term to allow flexibility in future strategic decisions.

QUESTIONS SUBMITTED BY SENATOR ANDREWS

AIR FORCE CONCURRENCE OF RECOMMENDATIONS

QUESTION: Air Force programs comprise 34% of the total defense budget. Your request shows overall spending would increase 24% in FY 84. Strategic weapons accounts climb 35% and R&D rises by 27%. A recent AF report entitled "Affordable Acquisition Approach" states that without any congressional budget cuts, the Administration's 5 year plan for weapons purchases is underfunded and greatly underestimates future costs. It lists several weapons systems in order of priority to be cancelled. Will the Air Force concur with these recommendations if Congress is unwilling to cut defense outlays by anything less than $15 billion?

ANSWER: The "Affordable Acquisition Approach" (A^3) study, an Air Force initiative, provided an historical review of trends in weapons systems acquisition, including a look at cost growth in some past procurement programs. In recent years we have made good progress in correcting problems discussed in the study. The study did not advocate cancelling any particular program(s). The intent of the study's hypothetical example was to show one way (program cancellations) to manage large scale budget reductions.

As we put our annual budget requests together, we review our programs carefully and have a range of management options available including cancellations and reductions. However, if Congress were to cut FY 84 defense outlays substantially, any specific program cancellations or other management actions would have to be considered on a case by case basis relative to national security and the magnitude of final budget reductions.

AIR FORCE PROGRAMS AFFECTED

QUESTION: Defense has released the figure of $650 million in total obligational authority that can be proposed for rescission in FY 83 appropriations. Can you tell us what Air Force programs will be affected?

ANSWER: The Air Force is unaware of any rescission message being proposed by the Secretary of Defense at this time.

EQUIPMENT AND COSTS FOR AF RESERVE AND ANG

QUESTION: $500 million has been requested for Guard and Reserve equipment, according to previous defense budget testimony. Can you break this down on the equipment and costs for the AF Reserve and the Air National Guard?

ANSWER: The Air Force portion of FY 84 request for investment equipment for Air Reserve Forces is $148.3 million. As supported in the February 1983 "Force Readiness Report, Annex to Volume II: National Guard and Reserve Equipment", the breakout includes:

FY 84 PROCUREMENT TABLE
($000)

Air Force Reserve

Aircraft Maintenance/Repair Ship Eq.	2,038
Cargo/Utility Vehicles	2,016
Test Eq.	1,232
Passenger/Special Purpose/Base Maintenance Vehicle	2,284
Noise Suppressors	5,600
Generators/Electrical/Air Conditioning Eq.	2,464
Aircraft Ground Servicing Eq.	794
Local Purchase/Medical Eq.	875
Personal Safety/Life Support Eq.	252
Communications/Electronics Eq.	294
Industrial Plant Eq./Real Property	1,074
Items Costing Less Than $100K	8,777
	27,700

Air National Guard

Specialized Aircraft Maintenance/Repair Shop Eq.	22,295
Test Eq.	6.515
Generators/Electrical Eq.	15,839
Communications/Electronic Eq.	13,050
Trucks/Trailers/Vehicles	40,243
Aircraft Ground Support Eq.	4,400
Barriers, Shelters, Airconditioning Eq.	3,824
Personal Safety/Life Support Eq.	2,042
Local Purchase/Medical Eq.	2,827
Industrial Plant Eq.	2,432
Items Costing Less Than $100,000	7,133
	120,600

This reflects only those items which can be isolated in the Procurement Accounts. Excluded are spares, repair parts, munitions, etc.

NEW F-15'S AND 16'S FOR ANG

QUESTION: You are requesting 48 more F-15's and 120 more F-16's for FY 84. This year will have the first delivery of F-16 fighters to the South Carolina Air National Guard, the only state receiving them. The Air Guard is responsible for nearly 70% of the Air Force air defense capability of the nation. The 119th Fighter Interceptor Group in Fargo is still flying early model F-4's. When might they and other Air Guard squadrons with critical missions expect to get F-15's and F-16's?

ANSWER: [Deleted.]

C-141'S/C-130'S FOR ANG

QUESTION: The Air National Guard did an outstanding job in the airlift mission during the Southeast Asia conflict. Almost 60% of our tactical, or intra-theatre, airlift capability is in the Air National Guard and AF Reserve. They now operate C-7's, C-123's and C-130's. Are there any plans to assign them C-141's and increase the number of C-130's and KC-135's per squadron?

ANSWER: Both the Air National Guard and the Air Force Reserve perform admirably in the airlift and tanker mission areas. The Air National Guard and the Air Force Reserve will begin receiving C-141s in the early 1990s. While the FY 84 President's Budget does not reflect an increase in the number of C-130s or KC-135s per squadron, this subject is under continual consideration.

DECISION TO BUY DUAL ROLE FIGHTERS

QUESTION: $105 billion is budgeted for research work on the fighter derivative program, F-16E and F-15E ground attack models. You are also requesting $21.4 million in procurement funding for the fighter derivative aircraft. When will a decision be made by the Air Force on buying one or both of the F-16E and F-15E as dual-role fighters?

ANSWER: We plan to make the Dual Role Fighter decision in December 1983. Only one aircraft will be developed and modified to the dual role configuration which includes two-seats, a missionized rear cockpit and night/under the weather attack avionics. Following the decision, we will brief the interested Congressional committees and staff prior to going on contract.

EXPLAIN ENORMOUS INCREASE

QUESTION: Research funding for the advanced tactical fighter program from $37.4 million in FY 84 to $162.3 million in FY 85. What accounts for this enormous increase?

ANSWER: The FY 84 Advanced Tactical Fighter Technologies (ATFT) program funds two major R&D efforts which contribute to the technology required to develop a next generation tactical fighter aircraft: An airframe concept development study by eight major airframe contractors which will analyze potential ATF airframe designs, and a competitive advanced engine development program by two major engine contractors.

The FY 85 ATFT program continues technology development work in both airframe and engine designs, and funds an additional project which provides flight validation for those technologies determined to be critical to a potential ATF design.

The significant increase in FY 85 funding is a direct result of engine component hardware development work and testing which will continue during all of FY 85 in preparation for an advanced engine core buildup beginning in FY 86. The transition from conceptual engine studies and analysis in FY 84 to actual engine hardware development in FY 85 accounts for the major increase in required funding.

WHO GETS MONEY

QUESTION: You are requesting $132 million for the alternate fighter engine. Who gets this money?

ANSWER: Of the $132 million requested under the Alternate Fighter Engine Program, $98 million funds the continued full scale development of the General Electric F110 and $34 million funds the full scale development of the Digital Electronic Engine Control and a gear type main fuel pump for the Pratt & Whitney F100.

Total Air Force funding for competitive versions of both engines for FY 82 through FY 84 is as follows:

F100 Alternative Fighter Engine: $155.1M
F110 Alternative Fighter Engine: $153.9M.

B-1 BOMBERS FOR MULTIYEAR PROCUREMENT

QUESTION: You are requesting $6.2 billion in FY 84 to build 10 more B-1 bombers to be purchased on a multiyear basis. The bomber program has a budget ceiling of $20.5 billion. Some press reports indicate that this multiyear request, using some existing '83 appropriations, is partly to conceal significant cost-overruns on this plane. Can you respond to this? Will you submit a reprogramming request to use '83 appropriations for the multiyear procurement proposals?

ANSWER: We have no information that would support allegations of significant cost overruns in the B-1B program. In fact, the program is currently ahead of schedule and under budgeted costs. We are confident that 100 B-1B aircraft can be procured for the $20.5 billion (FY 81$) baseline cost estimate certified by the President.

As briefed to Congress, the $20.5 billion estimate assumes multiyear procurement (MYP) for the B-1B with a savings of $800 million (FY 81$). Our proposed MYP program requires initiation of an advance procurement contract for economic order quantity (EOQ) purchases in FY 83 followed by full MYP contracts for avionics and engines. The funding requirement for EOQ purchases would be provided by the Senate's version of the FY 83 supplemental appropriations bill. With Congressional approval of our MYP plan, we can achieve maximum savings in the B-1B program. If the proposed MYP plan were not approved or approved only in part, achievement of the $20.5 billion (FY 81$) estimate would be placed at greater risk.

FULL OPERATIONAL CAPABILITY FOR NAVSTAR

QUESTION: You have requested $341.6 million of the NAVSTAR Global Positioning System, a 52% increase over FY 83. Recentely, GAO issued a report disputing the schedules and costs of the system. It charges that multi-year savings have been overstated, user fees from civilians may not materialize and the full operating capability is in jeopardy. When is full operational capability expected? What do you estimate will be the eventual cost of equipping thousands of users with terminals?

ANSWER: Full operational capability, with an 18 satellite constellation that will provide three-dimensional global coverage, is scheduled for late 1988, as we informed the Congress when we sought multiyear approval.

The eventual cost for user terminals is directly related to the number bought, and that number has yet to be determined. Through FY 89, the DoD plans to buy almost 8,000 terminals at a cost of $1.3B. There will be three classes of user equipment, and their costs in FY 79 dollars for the basic receivers, but not including integration and installation costs are as follows:

(1) Manpack, $25,000
(2) Two-channel receiver, for relatively slow moving platforms, $36,000; and
(3) Five-channel receiver, for relatively fast moving platforms, $60,000.

The 52 percent requested increase over FY 83 funding reflects the ramp up in procurement as we continue to buy long-lead items, build satellites, and fully fund the first production satellite. The funding profile will peak in FY 85. Congress accepted this funding profile when the multiyear procurement was originally approved.

The cited GAO report was issued prior to our successful negotiation of a firm fixed price production contract. In our post negotiation response to the GAO, we reiterated that we expect to save $212.2 million through multiyear procurement. We remain confident we will realize those savings.

We agreed with the GAO that the level of prospective user fee reimbursement is uncertain. However, since the DoD recently improved the accuracy for civil users to 100 meters, we expect considerable civilian use.

F-15/F-16 PERFORMANCE

QUESTION: I understand the Air Force is unofficially unhappy with the decision by the Secretary of Defense not to sign an agreement with Israel giving the US access to all details of the fighting in Lebanon. It is reported that your disappointment is due largely to the detailed reports you expected on the performance of American-built F-15's and F-16's flown by the Israelis. Can you comment on this?

ANSWER: The U.S. Air Force (USAF) supports the Secretary of Defense's decision not to sign an additional Memorandum of Understanding with Israel. Existing agreements between the US and Israel are adequate to facilitate the transfer of the desired information.

A USAF team visited Israel in April 83 under the auspices of the existing US/Israeli agreements and through cooperation of the two air forces. The team was satisfied with the information received, was pleased with the performance of US equipment, and looks forward to further cooperation between the air forces.

C-17

QUESTION: As you know, Congress appropriated $60 million research and development funding for the C-17. In January, we learned the AF added approximately $75 million to the C-17 account. Now your FY 84 budget requests $26.8 million for the C-17. Since only $1 million was authorized for the C-17 in FY 83, have you submitted a reprogramming request for the $59 million? Would you bring us up-to-date on the C-17?

ANSWER: The Air Force did not add $75 million to the C-17 program in January 1983. Although various funding alternatives were considered, the current program is structured to use the $59 million from FY 1983 and $26.8 million from FY 1984 to phase into our FY 1985 full scale development start.

On 29 April 1983, a request to reprogram the $59 million for C-17 was forwarded for approval to the House and Senate Armed Services Committees.

RAPIER

QUESTION: Last year the Air Force was directed to explore off-the-shelf alternatives such as the Rapier or European Roland missile to fulfill the air defense role in continental Europe. After eight years and a cost of about $1.3 billion we sent the US version of the Roland to the New Mexico National Guard. Your FY 84 budget requests $62.9 million for the Rapier. Has the Rapier been chosen to fulfill the air defense role?

ANSWER: The $62.9 million requested for Rapier in FY 84 will be used to procure Rapier under the terms of a Memorandum of Understanding (MOU) between the US and United Kingdom (UK) which was signed in 1981. Under the terms of the US-UK MOU, the US will buy 32 Rapier fire units and the UK will man, maintain, and operate those Rapier systems for defense of seven US Air Force bases in the UK. The UK will bear the cost of manning and operating the Rapier systems in return for a reduction in the Trident R&D surcharge.

In the FY 83 Continuing Resolution Authority, the Congress added $50 million to the Rapier budget line and directed the Air Force to explore off-the-shelf short range air defense (SHORAD) missile systems for defense of US bases in continental Europe. The $50 million has not been obligated pending the results of ongoing discussions between the US and the Federal Republic of Germany (FRG) on a cooperative air defense arrangement. An initial assessment of the feasibility of a US-FRG cooperative arrangement should be complete by August 1983.

EQUIPMENT FOR ARMY GUARD AND RESERVE

QUESTION: I was pleased to see that Secretary Weinberger, in a June memorandum to the Secretaries of the Army, Navy, Air Force and the Chairman, JCS, re-emphasized DOD Directive 1225.6 that units that fight first shall be equipped first regardless of component. He ordered that the equipment inventory reporting systems identify obsolete as well as quantitative shortages in Guard and Reserve equipment; that the Services evaluate the progress of Guard and Reserve equipment fill; present a plan to correct deficiencies; and evaluate to what degree the respective Services are meeting the annual program and budget projections. Can you provide this committee with the progress the Army has made to implement these directives?

ANSWER: The Army equipment priority policy reiterates the DOD policy of first to fight is first equipped, regardless of component. Equipment distribution is made in accordance with the Department of the Army Master Priority List (DAMPL) which places all Army units in order of wartime, overseas deployment or other employment. The distribution of modernization equipment is made using the additional criteria of readiness and support considerations. Reserve Component Round Out units are equipped with the same priority as their Active parent unit to ensure equipment compatibility. The DOD Force Readiness Report (Volume II--Annex, National Guard and Reserve Equipment Readiness) is an annual report to the Congress which was last provided on 15 February 1983 and shows an evaluation of our progress in meeting our programs and projections for equipping the Guard and Reserve. It also presents the future plan for distribution of selected equipment to them. In addition, the Army has developed a report entitled Equipment Projected for Distribution to the National Guard and Army Reserve, which shows what portion of a fiscal year's budget will result in distribution of new procurement items to the Guard and Reserve at the end of the funded delivery period. The FY 84 edition of this report showing equipment distribution by state for the Guard and Reserve was provided to the Congress in March 1983 and listed $1,137.9 Million (ARNG $961.4M, USAR $176.5M) of new equipment procurement and distribution projections.

SUBCOMMITTEE RECESS

Senator **Rudman**. The subcommittee will stand in recess until Thursday when we will receive the testimony on the Navy R&D and budget overview.

[Whereupon, at 12:35 p.m., Tuesday, March 1, the subcommittee was recessed, to reconvene Thursday, March 3, 1983.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1984

TUESDAY, MARCH 8, 1983

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met, at 10:05 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, Andrews, Rudman, Proxmire, and Johnston.

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE NAVY

STATEMENT OF HON. JOHN F. LEHMAN, JR., SECRETARY OF THE NAVY

BUDGET REQUEST

Senator **RUDMAN** [presiding]. Good morning. The chairman is opening the Senate this morning so we will try to save some time and proceed. He should be here shortly.

This is the time we have scheduled for the committee to conduct an overview of the Navy's budget request for fiscal year 1984.

That portion of the Navy's budget before the Defense Subcommittee totals $84.8 billion, an increase of $4.6 billion over appropriations to date for fiscal year 1983. That is about a 5-percent real growth.

Navy outlays projected for 1984 totals $75.2 billion, up about $8 billion, or a real growth of about 6 percent.

The growth in the Navy's budget authority is limited in 1984 mostly because of the sharp one-time increase approved by Congress last year to begin construction of two nuclear-powered aircraft carriers. However, there is actual negative real growth in Marine Corps procurement that influences the comparison.

COMPARATIVE TABLE

We will ask the Navy to insert into the record at this point a comparative table of appropriation accounts for the 1983-84 fiscal years, including dollar increases or decreases in real growth calculations by account.

[The table follows:]

DEPARTMENT OF THE NAVY REAL PROGRAM GROWTH FROM FISCAL YEAR 1983 TO FISCAL YEAR 1984

[In millions of constant fiscal year 1984 dollars]

	Fiscal year 1983 [1]	Fiscal year 1984 budget request [1]	Difference	Real program growth (percent)
Military personnel, Navy	10,729	11,294	+564	5.3
Reserve personnel, Navy	669	743	+74	11.1
Operation and maintenance, Navy	21,700	23,226	+1,526	7.0
Operation and maintenance, Navy Reserve	661	693	+32	4.8
Aircraft procurement, Navy	10,912	11,127	+215	2.0
Weapons procurement, Navy	3,650	4,029	+378	10.4
Shipbuilding and conversion, Navy	17,224	12,669	−4,525	−26.3
Other procurement, Navy	3,828	5,002	+1,174	30.7
Research, development, test and evaluation, Navy	6,390	8,181	+1,791	28.0
Military construction, Navy	1,130	1,344	+214	19.0
Military construction, Navy Reserve	26	25	−2	−6.1
Family Housing, Navy	753	676	−77	−10.2
Navy stock fund	373	683	+310	N/A
Total, Navy	78,046	79,720	+1,674	2.1
Military personnel, Marine Corps	3,351	3,463	+112	+3.3
Reserve personnel, Marine Corps	173	177	+4	+2.5
Operation and maintenance, Marine Corps	1,523	1,576	+53	+3.5
Operation and maintenance, Marine Corps Reserve	54	54		+.2
Procurement, Marine Corps	2,098	1,852	−246	−11.7
Marine Corps stock fund	12	22	+10	N/A
Total, Marine Corps	7,211	7,144	−67	−.9
Total, Department of the Navy	85,257	86,864	+1,607	1.9

[1] Columns do not add due to rounding.

INTRODUCTION OF WITNESSES

Senator **Rudman**. I would like to welcome the principal witnesses today, Secretary Lehman, Admiral Watkins, and General Barrow. We have your prepared statements, they will be included in full in the record at this point.

Aside from General Barrow, the prepared remarks seem to be more in the form of posture statements than budget overviews. We will ask you to highlight your statements and concentrate more on the nature of the appropriation requests pending before the committee.

Mr. Secretary, please proceed.

ESTABLISHMENT OF COHERENT STRATEGY

Secretary **Lehman**. Senator, thank you. This is my third appearance before the subcommittee.

Senator **Rudman**. Mr. Secretary, I did not see my colleague come in. Senator Proxmire.

Senator **Proxmire**. I have no statement, thank you.

Senator **Rudman**. All right, fine.

Secretary **Lehman**. We have actually a great deal to report on and I think that you will find the news is very good.

The program that was submitted 2 years ago was an ambitious one, based on commitments and the vital interests. They are provided to the Department of the Navy by the national command authority from which we derive our plans and programs. Our program was based on a major effort to update and put together a coherent strategy to achieve those commitments with minimum and austere force levels and capabilities.

The news, as I have said, is very good. We have a very fine, coherent strategy to deal with the commitments that have been provided to us. The Chief of Naval Operations and the Commandant dwell on these at some length in their posture statements.

Our first priority has been personnel. The news has never been better. In 207 years of the Navy and the Marine Corps, we have the best retention news to report in any peacetime period. The quality, the morale, the training, and virtually every measure of the health and readiness of our people are up. As I have said, people are the most important priority of all.

Readiness news is good. We in the Navy are engaged in a major force expansion—some 30 percent—toward a 600-ship Navy, including 15 aircraft carriers. We are well along the curve to achieving that. We are up from 460-odd ships 2 years ago to the current level of 514 ships, and the readiness of those ships is an average 8-percent higher today than it was 2 years ago.

AIRCRAFT READINESS

The readiness of our aircraft squadrons is some 16-percent higher than it was 2 years ago. We have 370 more aircraft in our active force today than we had 2 years ago. And yet, the readiness figures continue to climb and will climb through this 5-year plan.

AIRCRAFT CARRIER GOAL

The 15-carrier goal has been achieved. We have achieved it with the appropriation of CVN-72 and, last year, settled the carrier issue for the remainder of this century. While the plan that was submitted to Congress includes one CVN in 1988, it will be deleted. There is no longer a need for a carrier to be started in this decade.

We will achieve the 14th deployable carrier with the delivery of *Theodore Roosevelt*—which I am happy to report is ahead of schedule and will be launched several months earlier than the already accelerated, 14 months accelerated, schedule. We will achieve the 15 deployable carrier level in 1989, with the delivery of CVN 72, the first of the two aircraft carriers and we will maintain the 15 level through the end of the century.

AIRCRAFT PROCUREMENT

In aircraft procurement we are nearly double the rate that was averaged during the 1970's. We are continuing to grow the force. At the same time the increased readiness, the bonus programs, the increased quality of our enlisted personnel has enabled us to achieve, for the second straight year, the safest year in naval aviation history. We have saved about 20 lives compared to the computer projection of safety records. We have saved over 300 million dollars' worth of aircraft in the accidents that did not happen. The news in aircraft procurement is very good.

But the best news of all, Mr. Chairman, is in defense management. Despite the continuing chorus of negative criticism about defense management, the facts speak differently. The facts show that we have delivered all of the ships last year, a net ahead of schedule and under cost.

The facts show that we put most of our aircraft production programs on firm, fixed-price contracts. They show we have brought the price of E-2C's, of A-6's, of F-18's down, not up. So the record of the last 2 years manifests the tremendous reforms that Secretary Weinberger has brought about. The way business is done has enabled the Carlucci initiatives to be realized and has produced very real results.

It should give great encouragement to this committee to see that the results of these management initiatives, contracting reforms and procurement discipline are bringing about greater returns than even the substantial increases that President Reagan has provided in the 2 years.

So, you should take from this hearing today, Mr. Chairman, considerable cause for confidence and optimism for the future. We are on course in the Navy and Marine Corps and we will achieve the objective set 2 years ago by the end of this decade.

Thank you, Mr. Chairman.

[The prepared statement of Hon. John F. Lehman follows:]

PREPARED STATEMENT OF HON. JOHN F. LEHMAN, JR.

SECRETARY OF THE NAVY

Mr. Chairman, I welcome this opportunity to offer my assessment of the current posture of the Navy-Marine Corps team for Fiscal Year 1984.

Two years ago, President Reagan presented to Congress a program to reverse more than a decade of declining american military strength. In the preceding ten years, real defense spending had declined twenty-two percent, our nuclear megatonnage had been cut in half, our strategic bomber force had declined by 25%, our ballistic missile submarine force had dropped from 41 to 31, and our Navy had been slashed from nearly a thousand ships to 468, and from 23 aircraft carriers to 12.

During this same decade, the Soviet Union carried out one of the greatest peacetime military expansions in history. Since 1965, the Soviets increased military spending by about four percent real growth annually, nearly doubling their spending over that period. This growth, has been most noticeable in the Soviet Navy. Only a coastal defense force two decades ago, it is now a modern "blue water" fleet capable of global power projection.

These adverse trends led the Chief of Naval Operations to testify before Congress that the United States Navy no longer enjoyed superiority at sea. As a result, President Reagan set a clear objective for the Navy and Marine Corps to regain clear maritime superiority wihtin this decade. As the President put it:

> "Though the Soviet Union is historically a land-power, virtually self-sufficient in mineral and energy resources and land linked to Europe and the vast stretches of Asia, it has created a powerful blue ocean Navy that cannot be justified by any legitimate defense need. It is a Navy built for offensive action, to cut free world supply lines and render impossible the support by sea of free world allies. By contrast, the United States is a naval power by necessity, critically dependent on the transoceanic import of vital strategic materials. Over 90% of our commerce between continents moves in ships. Freedom to use the seas is our nation's life blood. For that reason, our Navy is designed to keep the sea lanes open world wide. *Maritime superiority for us is a necessity*. We must be able in time of emergency to venture in harm's way...areas to assure access to all the oceans of the world. Failure to do so will leave the credibility of our conventional defense forces in doubt. *We are...building a 600 ship fleet including 15 carrier battlegroups*."

As this committee knows, maritime superiority is but one element of our national strategy. Nonetheless, it is a fundamental requirement, necessary for the success of *any* national strategy.

The program put before Congress two years ago to achieve this objective was built upon seven elements:

- First, a more realistic *strategy* for the use of Navy-Marine Corps forces to maximize their deterrence in peacetime, and to prevail if deterrence failed.
- Second, the restoration of the quality, training and morale of our personnel.
- Third, the enhancement of Navy and Marine Corps readiness through adequate maintenance, repair, spare parts and support.
- Fourth, the importance of our sea based nuclear deterrent, the most survivable and enduring component of the U.S. strategic triad.
- Fifth, the establishment of a shipbuilding, reactivation and conversion program to increase the force with the right kinds of ships and to save an industrial base on the verge of collapse.
- Sixth, to establish an aircraft modernization and procurement program to restore aircraft numbers and quality to meet operational requirements.
- Seventh, to build up stocks of ammunition and missiles to realistic objectives for sustaining combat.

The Navy and Marine Corps recovery program in pursuit of these objectives has been underway for two years and I am happy to report that it is on course. The budget for FY-84 will be the fourth Reagan defense recovery budget, counting the 1981 supplemental and the 1982 revision. We are moving closer to achievement of many of our objectives and the effects of our programs are apparent everywhere in the Navy and Marine Corps. The dramatic benefits of these changes - greater strength, confidence and capability - far outweigh the costs as we strive to meet the threat of Soviet military power.

The coming of First Secretary Andropov to power has failed to produce any discernible change in the expansive thrust of Soviet military strength. Thus the growth of Soviet Naval capability and the emphasis on a global scope for its operations continues unabated.

During 1982, Soviet naval operations showed advances in sophistication and capability. For the first time, exercises were conducted by BACKFIRE bombers against U.S. carrier groups. We saw the first attempts by air-to-air misile-armed FORGER V/TOL aircraft to intercept U.S. naval aircraft. Another new element was the participation of the carrier KIEV in support of Shield 82, a large Warsaw Pact exercise. In Southwest Asia, Cam Ranh Bay provided support for another innovation - a Soviet carrier battle group, headed by MINSK, deployed to the Indian Ocean. Closer to home, the dispatch of a task force to Cuba highlighted the increasing importance to the Soviet Navy of its Caribbean enclave.

Soviet and Warsaw Pact shipyards continued their steady stream of deliveries to the Soviet Navy during 1982. During 1983, we are expecting to see the first deployments of the third KIEV class carrier, the first of the nuclear-powered TYPOHOON class ballistic missile submarines, and the initial BLACK-COM-1 class cruisers. The fourth KIEV class carrier is fitting out, and the second KIROV class nulcear-powered cruiser is nearing completion. Large destroyers of the SOVREMENNYY and UDALOY classes continue in production at two major yards. There are seven submarine classes now in production.

Evidence mounts that a large conventional carrier program is underway. BACKFIRE bombers continue to enter the Soviet Naval Air Force. The new HELIX antisubmarine helicopter is beginning to replace the older HORMONE, and in 1982 HELIX was deployed for the first time on a carrier of the KIEV class. Polish shipyards continued to supply amphibious warfare ships and repair ships to the Soviet Navy, despite the turmoil in that nation.

The USSR continues, in its role as the world's largest exporter of naval hardware, to devote a portion of its naval shipbuilding capacity to foreign exports. Cuba, in 1982, received more arms shipments from the USSR than in any year since 1962. Libya, Algeria, and India all received major deliveries of Soviet naval equipment.

Perhaps, even more important than the litany of new classses of Soviet naval ships and aircraft, is the incremental improvement to weapon and sensor systems that support those ships and aircraft. New missiles, guns, mines, torpedoes, radars and sonars are joining the Red Fleet, aided in part by the continued transfer of Western technology. Soviet exploitation of Western scientific achievements constitutes a major threat, not only to our military forces, but also to the very fiber of the Western industrial economy.

The share of the Soviet defense budget allocated to the Soviet Navy has been steady for many years. As that budget grows in absolute terms, so does the capability of their fleet. I have highlighted some of the major programs and operations of the lat year, but it is astonishing to view the across-the board accomplishments of Soviet naval industry and the Soviet Fleet. A balanced naval force has been developed, with support requirements receiving attention along with combatant elements. It is this dedication to the broadest concept of seapower that permits the Soviet Navy to operate globally today.

In addition to the primary threat of Soviet naval and landbased forces, the United States Navy and Marine Corps must be able to cope with potential threats from other forces as well. Two recent incidents -- in 1981 when U.S. forces were engaged by Libyan forces in the gulf of sidra, and the 1982 conflict in the Falklands, where anti-ship cruise missiles and nuclear attack submarines were used in combat for the first time, illustrate graphically that there is no "low threat area" for U. S. Navy and Marine Forces committed to a global mission.

In the face of these diverse threats, we set as a major goal the creation of a realistic strategy for the use of our forces. Current naval strategy for the achievement of maritime objectives is built upon a number of fundamental premises. First, the Soviet threat to the maritime lifelines of the free world is now permanently deployed in every area of our vital interests. It follows that a conventional naval conflict between east and west cannot be limited to a single ocean region. Second, the global nature of our naval forces derives from the commitments of some forty treaty relationships. For the Navy and Marine Corps these requirements are not matters of choice. They must all be met.

The implication of these two premises is far-reaching. The disposition of forces on both sides has changed dramatically in the past decade. In contrast to ten years ago, the Soviets now have a Pacific fleet of some 765 ships and combatant craft. They operate routinely from forward bases such as Cam Ranh Bay and Da Nang in Vietnam. At the same time, the lower 48 United States have become dependent for one-third of their oil on the Alaskan sea lanes. Thus, the United States can no longer consider abandoning one ocean to reinforce another in time of conventional war.

A third major premise is that the West can no longer rely on a passive defensive posture at sea. We do not have the merchant tonnage to sustain heavy losses in a submarine war of attrition as we did in World War II. The Soviets today have over 280 attack submarines; Hitler began the World War II with fewer than 50 ocean-going submarines. The soviets massive fleet of diesel and nuclear attack submarines, exercises regularly with the intention of wartime operations from areas much closer to the North Atlantic than the Kola Peninsula. Our response to this threat to our maritime vulnerability cannot be simply to throw a passive barrier across the Greenland-Iceland-UK gap. We must be able to prevent the Soviets from gaining the initiative and thus enabling their submarines to prey on shipping in the Atlantic and Pacific.

Similarly, NATO must command the entire Mediterranean Sea if the security of the southern tier members of NATO is to be ensured. Let us not overlook an important consequence that flows from NATO control of the flanks. Successful achievement of NATO objectives on both flanks will ultimately compel the Soviets to divert forces, denying Moscow the advantage of concentrating all of its military power for an assault in central Europe.

Thus our maritime strategy must be based on a forward defense. Such a successful strategy at sea is not, as some armchair strategists would suggest, an alternative to a coalition defense of Europe. Nor does it impede a strong, and modernized conventional land defense of NATO. Instead, our maritime strategy complements these objectives. Its achievement is a necessary prerequisite for the success of any NATO defense. Similarly, in the Pacific and Indian Ocean theatres, favorable geography and the naval and land-based forces of the U.S. and its allies provide a clear strategy for success.

Much progress has been made in the past two years towards redesign of our peacetime forward deployments, our exercises, and our integration of Navy, Marine Corps, Air Force and Army assets to implement this strategy. Since World War II, Presidents have made use of forward deployed battle groups and Marine amphibious forces more than 250 times to preserve peace. Regular forward naval deployments are widely recognized as a stabilizing force and as a strong deterrent to conflict. The Falklands offered a contrast. If the United Kingdom had indicated its intention to continue regular peacetime deployments to the Falklands, it might have avoided that tragic conflict. But peacetime deployments are not merely to show resolve or to manage crises. For the Navy and the Marine Corps, they are also the best method to enhance training and readiness. In keeping with our new strategy, we have completely reordered our peacetime deployments to add more realistic multicarrier operations, greater flexibility for theatre commanders, and far more useful training, while at the same time reducing the time spent away from homeport by Navy and Marine Corps personnel. This new method of deployment, called "FLEXOPS" has resulted in multiple carrier exercises in the Norwegian Sea, the Eastern Mediteranean, the Carribean and the Aleutians. It has significantly enhanced the readiness, morale, and flexibility of our naval forces.

In 1982, the Navy and the Marine Corps participated in more than 157 exercises world wide, a third of which were joint or combined exercises with other U.S. Services or our allies. These operations were conducted in all types of conditions - arctic, desert and jungle. The capabilities of our Marine amphibious forces continue to be dramatically demonstrated in Lebanon, where they are serving with great restraint under difficult conditions.

Mr. Chairman, two years ago we set forth a program intended to recapture maritime superiority for the United States. It was based on a 600-ship Navy, built around 15 battle groups. At that time, some said it should not be done — that such a Navy would detract from other commitments, that both technology and innovation in naval warfare made surface ships vulnerable and obsolete. Others said that it could not be done, that we lacked the ships, the money, the men, and above all, the management capability to oversee such an undertaking.

But events over the past two years have confounded the critics. The continued growth of Soviet forces and the Falklands conflict have confirmed our choices. The 600-ship Navy is well on its way. Accompanying the expansion of force structure has been an increasing recruitment of high quality personnel. Existing forces have been made more ready. Morale is high. We have demonstrated that we can manage the naval recovery program effectively, with many elements delivered ahead of schedule and under budget. We have tried very hard to be worthy of the confidence placed in us by the Congress and the American people.

Strategic planning, capable management and skilled personnel are not, however, the only requisites for achievement of our goals. As Disraeli so aptly put it, "the secret of success is constancy of purpose." At this midpoint in our naval recovery program, the secret of success is, indeed, the constancy of our purpose. Mr. Chairman, the United States is well on its way toward maritime superiority. I am certain that with your continued support we shall achieve it.

BIOGRAPHY
JOHN F. LEHMAN, JR.
SECRETARY OF THE NAVY

ON JANUARY 23, 1981, PRESIDENT REAGAN ANNOUNCED THE SELECTION OF JOHN F. LEHMAN, JR., TO BE SECRETARY OF THE NAVY. HE WAS CONFIRMED BY THE SENATE ON JANUARY 29 AND TOOK THE OATH OF OFFICE ON FEBRUARY 5, BECOMING THE 65TH SECRETARY OF THE NAVY, AND ONE OF THE YOUNGEST MEN TO BE APPOINTED SECRETARY OF THE NAVY.

PRIOR TO THIS APPOINTMENT, DR. LEHMAN WAS PRESIDENT OF ABINGTON CORP., A MANAGEMENT FIRM THAT SPECIALIZED IN DEFENSE MATTERS.

HE BEGAN HIS CAREER IN DEFENSE AND FOREIGN AFFAIRS AS A STAFF MEMBER OF THE FOREIGN POLICY RESEARCH INSTITUTE FROM 1967 TO 1969 AT THE UNIVERSITY OF PENNSYLVANIA. FROM 1969 TO 1974 HE SERVED AS SPECIAL COUNSEL AND SENIOR STAFF MEMBER TO DR. HENRY KISSINGER ON THE NATIONAL SECURITY COUNCIL, AND FROM 1974 TO 1975 WAS A DELEGATE TO THE MUTUAL BALANCED FORCE REDUCTION NEGOTIATIONS IN VIENNA. HE BECAME DEPUTY DIRECTOR OF THE U. S. ARMS CONTROL AND DISARMAMENT AGENCY IN 1975, HOLDING THAT POSITION UNTIL 1977.

UPON GRADUATING FROM THE LA SALLE COLLEGE HIGH SCHOOL, MR. LEHMAN ENROLLED IN ST. JOSEPH'S COLLEGE, WHERE HE EARNED A B. S. IN INTERNATIONAL RELATIONS IN 1964. THAT SAME YEAR, MR. LEHMAN ENLISTED IN THE AIR FORCE RESERVE. HE CONTINUED HIS EDUCATION AT CAMBRIDGE UNIVERSITY IN ENGLAND AS AN EARHART FELLOW AND GRADUATED IN 1967, RECEIVING A B.A. WITH HONOURS LAW AND AN M.A. IN INTERNATIONAL LAW AND DIPLOMACY. HE LEFT THE AIR FORCE RESERVE AND ACCEPTED A DIRECT APPOINTMENT TO THE RANK OF ENSIGN IN THE NAVAL RESERVE IN JANUARY 1968. SUBSEQUENTLY, HE WAS DESIGNATED A NAVAL FLIGHT OFFICER (BOMBARDIER-NAVIGATOR) AND THEN PILOT, AND HAS BEEN PROMOTED SUCCESSIVELY TO HIS CURRENT RANK OF COMMANDER. HE IS ASSIGNED TO MEDIUM ATTACK WING ONE, NAVAL AIR STATION, OCEANA, VIRGINIA. IN 1974, HE EARNED HIS PH.D. IN INTERNATIONAL RELATIONS FROM THE UNIVERSITY OF PENNSYLVANIA. HE HAS BEEN A VISITING FELLOW AT JOHNS HOPKINS SCHOOL OF ADVANCED INTERNATIONAL STUDIES AND A CHUBB FELLOW AT YALE.

DR. LEHMAN HAS AUTHORED OR CO-AUTHORED SEVERAL PUBLICATIONS ON NATIONAL AND INTERNATIONAL DEFENSE AND FOREIGN AFFAIRS SUBJECTS. THEY INCLUDE: THE PROSPECTS FOR ARMS CONTROL, ED. BY J. E. DOUGHERTY AND J. F. LEHMAN, JR. (MCFADDEN: NEW YORK, 1965); ARMS CONTROL FOR THE LATE SIXTIES, ED. BY J. E. DOUGHERTY AND J. F. LEHMAN, JR. (VAN NOSTRAND: PRINCETON, 1967); THE EXECUTIVE, CONGRESS AND FOREIGN POLICY, BY JOHN LEHMAN (PRAEGER: NEW YORK, 1976); AIRCRAFT CARRIERS: THE REAL CHOICES, BY JOHN LEHMAN (SAGE: 1978); AND BEYOND THE SALT II FAILURE, BY JOHN LEHMAN AND SEYMOUR WEISS (PRAEGER: NEW YORK, 1981).

HE WAS BORN ON SEPTEMBER 14, 1942, IN PHILADELPHIA, PENNSYLVANIA, AND IS MARRIED TO THE FORMER BARBARA WIELAND. THEY HAVE TWO CHILDREN JOHN F., III, 3, AND ALEXANDRA, 5. THEY RESIDE IN MCLEAN, VIRGINIA.

INTRODUCTION OF ASSOCIATES

Senator **Rudman**. Thank you, Mr. Secretary.

First for the record, would you please identify the gentlemen at the table with you, whom we all know, but for the record would like to have identified.

Secretary **Lehman**. The Chief of Naval Operations, Admiral Watkins and the Commandant of the Marine Corps, General Barrow, are our principal witnesses.

General **Barrow**. This is Mr. Comstock who is the Fiscal Director, Headquarters, Marine Corps.

Senator **Rudman**. Thank you, gentlemen.

Admiral.

Chief of Naval Operations

STATEMENT OF ADM. JAMES D. WATKINS, U.S. NAVY, CHIEF OF NAVAL OPERATIONS

POSITIVE OUTLOOK FOR FISCAL YEAR 1984

Admiral WATKINS. Thank you, Mr. Chairman.

First I would like to say, it is a great honor and privilege to be here for the first time as the Chief of Naval Operations.

My posture statement is one that is very positive in tone and outlook this year. Two years ago before the various committees in the Congress, my predecessor talked about being overexposed and underinsured; being on the ragged edge of adequacy when it comes to our globally disposed forces. He pointed out that without an increase in budget resources we would see perpetuation of a downward spiral toward maritime inferiority.

But the congressional action in the budget supplemental of 1981, the budget amendment of 1982 and the Continuing Resolution Act of fiscal year 1983, we now have clear and unequivocal evidence that the Navy is on the mend. It is more ready, more spirited, more able than I have seen it in the past 20 years—thanks to our Nation's desire for a stronger defense in the face of the inexorably increasing Soviet military power and the superb support and the responsiveness of the Congress to that shift in emphasis.

I talk briefly in the formal statement for the record today about the maritime strategy deriving itself from the national security objectives which I think are wisely laid. It is also derived from defense guidance which is a summary of the national security objectives. Those objectives are reflected in the annual report to the Congress by the Secretary of Defense.

NAVY READINESS

I believe we have a good fusion between national objectives, and defense guidance. There is also a sense of urgency imposed on the Defense Resources Board by the unified commanders worldwide and by the support of the services through the Joint Chiefs of Staff in developing a cohesive program that matches those national security objectives.

I point out that the Navy today is a ready Navy. I think you may recall the famous 22,000 petty officer critical skill shortage that was bringing the Navy to its knees only a few years ago. At the end of fiscal year 1982, that shortage dropped to 17,400. At the end of fiscal year 1983, it will be down to 11,700 and we are finally seeing light at the end of the tunnel and closing the gap between the growing Navy which has grown nearly 20,000 in end strength over the past 2 years and continues that growth rate both from recruiting and retention standpoints. In fact, we have been able to hold our recruiting budget constant because we have been able to build by retaining the skilled petty officers, which is a very cost-effective way to build a Navy.

MATERIAL READINESS AREA

In the material area, as the Secretary mentioned, the ship and aircraft readiness is improving. In addition, those supplemental and budget amendments that I talked about are now beginning to hit the fleet in terms of spares and bullets. The bins are filling up for the first time, markedly increasing our combat capability, both in aviation squadrons and ships.

We have eliminated most of what we call the executable backlog of depot level, repair for airframes, engines, ordnance, aviation support equipment, torpedos, and the like. The Congress did allow us to employ the increased civilian manpower ceiling for fiscal 1983 as a trial balloon to see if we could clear these backlogs out by getting additional ceiling points. We are in the middle of that test program now and our belief is we will be quite successful.

We have implemented "flexible operations," which is a scheme that modifies global naval deployments and makes them less rigid. By that I mean that we had fictitious geographic boundaries before which tended to cause us to use excessive fuel and to keep our ships out of port more than they had to be. Those restrictions defeated some of the benefits of the Navy's flexible mobile forces. That has been changed by the administration and has given us additional opportunities to train and to provide a naval presence such as was recently demonstrated off the Aleutian Islands for the first time since World War II.

SUSTAINABILITY

In sustainability, we are beginning to fill up for the first time across the board and are moving out toward what I consider to be realistic levels of nonnuclear ordnance inventories that more closely approach those required for the kinds of protracted conflicts that we could expect—certainly those over 20 days in length in conventional warfare.

MODERNIZATION

In modernization we are capable of meeting the curreft projected threats with Harpoon and Tomahawk in the distribution of our fire power into a variety of platforms at sea; in the robustness of our communications—both strategic and conventional; in the missile systems and in the close in weapons support. The lessons learned out of the Falklands seem to bear out what the Navy's program is asking for.

FORCE LEVELS

Insofar as force levels are concerned, we have had a net increase of 21 ships in fiscal 1982 to the current level of about 514 ships at the time of this session today. We have had 17 new construction ships authorized in fiscal 1982 and 12 out of 17 of those authorized for 1983 are now under contract. Seven conversions are also underway.

The *New Jersey* was recommissioned early and within budget. The *Ticonderoga,* the first Aegis ship of the CG–47 class was commissioned in January. U.S.S. *Saratoga* completed her service life extension program [SLEP] on time and within budget and is now back in the fleet for 15 additional years. SLEP is a very cost-effective program for those large ships.

In fiscal 1984 we are asking to add 28 net ships, funding new construction Trident's, attack submarines, CG–47 cruisers and the like.

AIRCRAFT PROCUREMENT

Aircraft procurement, as the Secretary mentioned, has been doubled and we are now well above that rate which, in recent years barely kept up with the loss rate.

The management actions I touch on in the statement amplify the Secretary's words; we have now initiated many management programs not only in new procurement control but, more importantly, in the implication and the implementation of those programs authorized by the Congress on a year-to-year basis, making sure that we execute the program in a most cost-effective way.

Then I talk a little bit about the Navy of tomorrow, the one we are asking for before this committee. It continues the theme of readiness, sustainability, modernization, and force levels to meet the growing threat, in keeping with the national strategy, so as to achieve the necessary level of maritime supremacy by decade's end. The budget is about a 2-percent increase in real growth over fiscal year 1983, and that will enable us to achieve this national objective.

So, I believe, in summary, that our strategy is sound. That it is coupled well with the national security objectives, and that we are focusing heavily on war fighting readiness and sustainability. The Navy is as ready as I have seen it in over 20 years, primarily because of the tremendous spirit and morale that has been regenerated among our sailors, both male and female.

If the Navy's budget for 1984 remains essentially intact, this positive outlook will be sustained and an acceptable maritime posture will have been achieved by the end of this decade.

Thank you, Mr. Chairman.

Senator RUDMAN. Thank you very much, Admiral.

[The prepared statement of Adm. James D. Watkins follows:]

PREPARED STATEMENT OF ADM. JAMES D. WATKINS, USN

CHIEF OF NAVAL OPERATIONS

Mr. Chairman, it is my privilege to appear before you today and report the progress we have made in discharging our responsibility to provide an adequate Navy for the nation's defense. The FY 1984 budget request continues the corrections initiated in the FY 1982 and FY 1983 budgets and will support the Navy's ability to execute the military strategies linked to the national objectives set by the President and Secretary of Defense. It is not a profligate budget - Navy real program growth is 2.1% - but it does provide essential funding for both strategic and conventional naval forces.

Our highest national priority is to prevent war by providing sufficient deterrence. Without sufficient strategic deterrence, our military strategy is built on quicksand; enduring strategic nuclear forces with assured strategic connectivity across the spectrum of potential nuclear exchange is fundamental to deterrence. The uniquely survivable submarine-launched ballistic missile force plays a key role in this deterrence. The FY 1984 budget contains funds for the 11th SSBN-726 class TRIDENT submarine, for installation of D-5 missile capability on the FY 1981 and all subsequent TRIDENTs, and the development of the D-5 missile. For these reasons FY 1984 funding for strategic RDT&E,N is almost three times the level of funding budgeted in FY 1983. Advance procurement funds are also requested for the ECX (TACAMO) aircraft which will improve strategic connectivity.

The FY 1984 Defense Report also emphasizes the importance of conventional capability. As was demonstrated recently in the South Atlantic, the failure to maintain a credible deterrent in areas of contention invites adventurism. This fact has long been recognized in our maritime strategy which emphasizes the forward deployment of adequate combat ready forces as the principal means of deterrence.

We can only maintain a credible conventional deterrence posture through the maintenance of adequate force levels, ready and sustainable, which are technologically capable of defeating the current threat. The FY 1984 budget request has been developed to ensure adequate funding in all of these areas.

Readiness

Navy's ability to respond to crisis is affected by many things, among them personnel, training, material and ordnance readiness. Personnel readiness is predicated upon sufficient quantity and quality of people; today, it is the level of trained personnel that is critically important. Today's environment has helped our recruiting effort - in fact we have reached 100% of our recruiting goal - so that the main contribution to readiness comes now not from new enlistments but from retaining trained personnel. Navy has worked hard to retain highly skilled officers and petty officers. Nevertheless, retention continues to be our most serious personnel readiness shortcoming despite continuing improvement. Therefore, the FY 1984 budget submission continues requests for sea pay and selective reenlistment bonuses, two proven, extremely effective retention tools.

Peacetime deployments are not only ways of showing the flag; they also serve as an effective training tool. We have modified our peacetime deployments in order to provide for more multi-carrier operations, which provide greater flexibility for theater commanders, far more useful training, and a lower ratio of time out of homeport for our personnel. Responding to the Lebanon crisis has required a reduction in non-deployed fleet OPTEMPO. This reduction is in addition to a lower budgeted level for non-deployed fleets. Experience has shown that this level does not provide adequate training opportunities. Accordingly, the FY 1984 budget request restores non-deployed steaming days to prescribed OPTEMPO and retains the changes made in peacetime deployments, improving readiness of both the deployed and non-deployed fleets.

Material readiness can be described in terms of the percentage of required weapons systems that are serviceable, or in terms of the portion of the inventory capable of executing any or all missions assigned. Spare parts support and repair funding are important determinants of these indicators. We have increased spares procurement again in this budget request; the fleet is already beginning to react positively to the 50% increase from FY 1981 to FY 1983. As an example, our aircraft mission capable rate is estimated to increase from 63% in FY 1983 to 65% in FY 1984, thus continuing momentum towards our goal of 70%.

Also to improve material readiness, we have eliminated the executable backlog of depot-level repairs for airframes, aircraft engines, ship and air-launced missiles and ordnance, other aviation support equipment, torpedoes and such ship-borne equipment as radars, sonars and fire control systems.

Sustainability

Sustainability is the staying power of our forces - a measure of how long we will fight effectively in combat. Increased funding of required inventories and closer attention to combat sustainability during the design phase of new weapons systems have improved our staying power. Despite these recent improvements, shortages of spare parts and ordnance remain, caused by long-standing, non-global, short-war defense strategies of the past decade. Our budgets from FY 1981 to the current FY 1984 request have begun to correct this deficiency.

The FY 1984 budget request contains substantial increases in both Weapons Procurement, Navy and Other Procurement, Navy appropriations for ordnance and spare parts, which contribute to sustainability and to the associated goals of readiness and modernization. Threat ordnance inventories are showing significant improvements due to increased funding. Between 1980 and 1984, investment doubled and is programmed to double again in the five-year plan.

Part of the Navy's role is to assure the United States can support seaborne mobility necessary to sustain forward defense. Sealift to support a mobile force is the fastest growing portion of the Navy's budget. The FY 1984 budget request includes funds to convert four SL-7s to TAKR configuration; to buy equipment to be prepositioned; and to procure strategic sealift for the Ready Reserve Fleet. These latter will be dry cargo ships ready to sail within 5 to 10 days of call-up.

Reserve forces will also play a key role in our sustainability in combat, and I am determined that we place more emphasis on the integration of the Reserves into our operational forces. Reserve units are being enhanced to provide rapid mobilization and augmentation of our operational forces. The transfer of 1052-class and FFG-7-class frigates into the Reserve Force for their convoy escort role is one example of our on-going efforts to put modern hardware, ships and aircraft into the Reserve Force.

Modernization

Modernization provides the fleet a capability to meet both current and future threats. Because our ships and aircraft remain in the fleet so long, with over half of the FY 2000 inventory either in the water or on the builder's ways, modernization is critical to the Navy. Of primary importance is the need to distribute offensive power, expand fleet battle space, retain our technologically superior ASW capability, and contine to develop and modernize command, control and communications systems.

We are introducing weaponry into the fleet that will enhance striking power and distribute this power across more platforms. HARPOON missiles are now installed on submarines, surface ships, and attack and patrol aircraft, distributing anti-surface capability and extending lethality across a wide variety of platforms. The TOMAHAWK missile will also make a major contribution, extending our standoff capability to land attack as well as anti-surface roles. Included in the FY 1984 budget request are 330 HARPOONs and 124 TOMAHAWKs to be launched from armored box launchers in the near term and vertical launch systems in the future.

We continue modernization of the fleet's anti-air warfare (AAW) capacity in all phases of the Navy's defense-in-depth concept. E2-Cs providing early warning, combined with EA-6B jamming and fighter interceptors constitute the outer defenses. The PHOENIX missile is being provided to the fleet in greater numbers, helping to upgrade our outer defenses. STANDARD missiles on our AAW surface ships strengthen area defense, and NATO SEA SPARROW and the VULCAN PHALANX close-in-weapon-system (CIWS) provide essential point defenses.

The Soviets have an attack submarine force of over 280 ships. We could not with current merchant tonnage sustain the war of attrition begun by Hitler with 50 submarines. The South Atlantic war showed both the ability of nuclear attack submarines to bottle up combatants and the ability of a modern quiet diesel submarine to engage a stationary Naval Task Force. Defense in depth by technically sophisticated, layered ASW is required to combat this threat. Accordingly, we propose FY 1984 budget funding for P-3 aircraft and nuclear attack submarines, LAMPS MK I and MK III helicopters, improved sonars such as the SQS-53C and the BQQ-5, and a replacement for the aging SH-3 carrier ASW helicopter. The FY 1984 request also includes the first procurement funding for the MK-48 submarine-launched ADCAP torpedo and increased quantities of the MK-46 NEARTIP ship and air-launched torpedo.

These improved weapons must be complemented by enhanced capability to extend surveillance and intelligence-gathering activities. More importantly, we must develop systems that can distill the mass of data available into the information that is key to effective command decisions. The Integrated Tactical Surveillance System (ITSS) provides a structure to combine information from a variety of sources into a coherent form quickly useful to the tactical commander.

Force Levels

In FY 1984 we will add a total of 18 ships to our forces, commissioning 23 and decommissioning 5. The FY 1984 budget requests procurement funding for 23 ships, including 17 new construction, and conversion funding for a hospital ship, combat stores ship and four SL-7s/TAKRs. The new construction ships are one OHIO-class SSBN configured for TRIDENT II, three Los Angeles-class SSNs, three TICONDEROGA-class cruisers (CG), four MCMs, one coastal mine hunter (MSH), one LSD, one amphibious assault ship (LHD) and three oilers. The budget request also includes advance procurement for DDG-51 construction.

The DDG-51 is needed to provide timely replacement for ships of the DDG-2 and DDG-37 classes which face block tactical and technical obsolescence as they reach 30 years of service life commencing in 1989. Our replacement must be a tough, survivable ship, and warfighting capability has been our primary concern through the preliminary design phase. We have tried to consider all possible design concepts while providing a highly capable ship in the numbers we need within budget and acceptable technical risk. DDG-51 characteristics should provide warfighting capability while retaining flexibility through the contract design phase to capitalize on technical improvements which, if proven, can be incorporated in the lead or follow ships. We then will be in a better position to assess tradeoffs in cost and capability, and determine which design budget reservations should be retained in the lead ship design for potential forward fit or backfit.

The FY 1984 budget request expands aircraft procurement to 281, including funds for the F/A-18 Hornet, the AV-8B advanced Harrier that will improve close air support for Marine ground combat units, and the SH-60B LAMPS III ASW helicopter that will enhance our surface ship ASW capabilities. The program to modernize our tactical aircraft has been carefully integrated to support the increase to 15 carriers and 14 active duty air wings. Aircraft will be delivered as they are needed to support the fleet. While the aircraft requested provide important increases in capability, we will still fall short of the number of aircraft required to maintain the age of the inventory.

Management

In addition to modernizing and rebuilding the fleet, the Navy is working to improve management. We know that improved return on investment is necessary to support the rebuilding begun in FY 1981. We are participating in the management initiatives that OSD has started, including the revised PPBS process, limitations on new starts, multi-year contracting, and preplanned product improvement (P^3I). In addition, we have adopted a series of cost management measures to ensure that cost issues are raised to the appropriate management levels and are the subject of continuing cost control.

We are scrutinizing all planned procurements for their suitability for multi-year contracting. We are saving almost $200 million from three major multi-year procurements authorized in 1982 and 1983 and anticipate about $500 million savings from the six candidates in the FY 1984 budget request.

In our effort to manage cost reduction and technological complexity in the Navy, I believe that cost discipline and cost technology issues hold particular potential. Cost discipline includes weapons systems configuration control, independent cost estimating, second sourcing, contracting out and use of man-day/dollar productivity competition among public yards and Navy repair facilities performing similar work. Cost technology emphasizes cost as a criteria in design, operation, and support of weapons systems.

We recognize the importance of improving our management practices in the Navy and we appreciate that we still have room for improvements. I believe we have made substantial progress.

Conclusion

I appreciate this opportunity to present you with this overview of the progress the Navy has made and the progress that continues in the FY 1984 budget request. The Navy is making a great effort to be the best custodians of the resources you have provided. We have a sound and comprehensive maritime strategy supporting national policy and national security objectives. With your continuing support, we will achieve these objectives.

BIOGRAPHY

ADMIRAL JAMES D. WATKINS, UNITED STATES NAVY
CHIEF OF NAVAL OPERATIONS

James David Watkins was born in Pasadena, California, March 7, 1927. A 1949 graduate of the U.S. Naval Academy, he served in destroyers, then submarines. He received a masters degree in mechanical engineering from the Naval Postgraduate School in 1958 after completing the reactor engineering course at the Oak Ridge National Laboratory.

From 1960-62, he served as executive officer of the nuclear attack submarine USS SNOOK. Later, from 1964-66, he commanded the same submarine, participating in the first visit of a nuclear ship to Yokosuka, Japan, during that tour. Between these two tours of duty, he was assigned to duty in the office of Manager Naval Reactors, Atomic Energy Commission. By 1967 he had left submarines and served as executive officer of the nuclear-powered guided missile cruiser USS LONG BEACH (CGN 9) during two Gulf of Tonkin deployments in which LONG BEACH participated in shooting down five North Vietnamese enemy aircraft, two by long-range missiles.

He was then ordered to duty in the Bureau of Naval Personnel and became director of the nuclear-trained personnel branch. After selection to rear admiral in 1971, he was again assigned to duty in the Bureau of Naval Personnel as director of enlisted personnel, the first flag officer to be so assigned.

In September 1973, he was ordered to duty as Commander, Cruiser-Destroyer Group ONE, subsequently commanding Cruiser-Destroyer Force, U.S. Seventh Fleet, as well as a surface task group which deployed to the Indian Ocean in 1974. In December 1974, he was nominated for promotion to vice admiral and in April 1975 was appointed Deputy Chief of Naval Operations for Manpower and Chief of Naval Personnel.

In September 1978 he was ordered to duty as Commander, SIXTH Fleet, also assuming NATO duties as Commander, Naval Striking and Support Forces Southern Europe. In April 1979 the President nominated him for appointment to the grade of admiral and as Vice Chief of Naval Operations. He served as Commander in Chief, U.S. Pacific Fleet from July 31, 1981 to May 28, 1982. Admiral Watkins was nominated in March 1982 by President Reagan to succeed Admiral Thomas B. Hayward on June 20, 1982, as the twenty-second Chief of Naval Operations.

Admiral Watkins is married to the former Sheila McKinney of San Diego, California. They have six children: Katherine, Laura Jo, Susan, Charles, James, Jr., and Edward. His brother, retired Captain George C. Watkins, USN, was a graduate of the Naval Academy, class of 1944. His son Charles is a 1977 graduate of the Naval Academy. His son Edward is in the NROTC program at the University of California, Berkeley campus, class of 1985.

U.S. Marine Corps

STATEMENT OF GEN. ROBERT H. BARROW, U.S. MARINE CORPS, COMMANDANT OF THE MARINE CORPS

STATUS OF MARINE CORPS

Senator **Rudman**. General Barrow.

General **Barrow**. Senator Rudman, as you have previously indicated, I have a statement that has already been submitted for the record. I might add that it is the most comprehensive one that we have submitted during my tenure and in great detail in terms of our requirements.

Senator **Rudman**. We appreciate that very much.

General **Barrow**. Yes, sir. I will try to be brief.

It is an honor once again to appear before this committee and report on the state of your Marine Corps. This is my final report as Commandant and I wish to take this opportunity to express my deep appreciation to this committee for the support you have given me personally and the Marine Corps.

MARITIME RESPONSE

Across the board, the Marine Corps is notably healthy and getting healthier as the programs you have previously supported continue to move toward fruition. Beyond that, I am heartened by the ongoing actions to strengthen our naval forces, overall, as has already been talked about by Admiral Watkins. In that connection, I am firmly convinced that our Nation's security is closely tied to the effective use of seapower. We must preserve our oceanic lifelines and, in the event of war, we must possess the means to reinforce our allies and act with the degree of resolve historically characteristic of this great island Nation of ours. Success will require strong maritime responses, responses which stem from a clear maritime superiority and which rest on the solid foundation of American seapower.

Simple economics tell us that we cannot have forces stationed in every location where there may be a potential crisis. That means that when required we must be ready and able to move appropriate combat power to such places.

An amphibious task force can be deployed over the seas independent of fragile political agreements or forward basing to a precise location to provide deterrence, to signal our Nation's resolve, or to respond appropriately should deterrence fail.

RESPONSE TO INTERNATIONAL INCIDENTS

The Marine Corps, with its flexibility to task organize its forces to the mission at hand, with its unique forcible entry capability, and with the means to sustain itself from the sea, provides this Nation with an invaluable capability. Nothing perplexes those who would create mischief more than the anxious knowledge that somewhere beyond the ocean's horizon there is a Navy-Marine Corps amphibious task force, poised and ready to deal with that mischief. This has been the steadfast utility of your Marine Corps, the readiness to respond with the capability to do whatever needs to be done.

READINESS

My No. 1 priority remains readiness, which encompasses many things of course—people, equipment, training, and good leadership. Marines today continue to hone their skills both individually and as units to maintain a constantly high state of readiness. We demonstrate that routinely. For example, this last year saw marines participating in more than 180 exercises, almost half of which were conducted beyond our shores with the forces of approximately 50 foreign nations. Intensive training such as this prepares us to respond to crises of all kinds, as evidenced by our marines presently serving in Lebanon.

BUDGET REQUEST

Our budget request—and I want to emphasize this—our budget request reflects a very carefully balanced program of those essential elements necessary to insure that the Marine Corps remains a viable force-in-readiness for this country.

The ingredients of our program reflect essential modernization of aging combat equipment, a modest increase in manpower, and improvement in our capability to sustain our marines once in combat. There are no frills, no exotic equipment.

All of us in the Marine Corps, from the Commandant to the privates wherever they serve, are excited over the ongoing initiatives to enhance our capability to fight and win. Enhancements will appear across the board over the next several years—we hope—enhancement in weapons, vehicles, aircraft, equipment. Indeed, in my 41 years as a marine it is the most unprecedented peacetime enhancement of capability that I have been witness to.

It does us no good to be ready at Camp Lejeune or Camp Pendleton. We must continue to man strong forward-deployed forces afloat and be capable of projecting ready forces across the sea to where they are needed.

In this respect I strongly support the efforts of Secretary Lehman and Admiral Watkins to regain clear maritime superiority, which includes programs essential to the Marine Corps principal reason for being—amphibious operations. Their amphibious shipbuilding program promises revitalization of the amphibious lift capability of the Navy-Marine Corps team.

MARITIME PRE-POSITIONING PROGRAM

The most innovative and promising strategic mobility initiative is our maritime pre-positioning program. This concept—not thoroughly understood in many places—provides for the rapid commitment of highly capable and sizable Marine forces to crisis areas and combines the best features of airlift and sealift.

The Marine Corps' ability to meet the challenges of the future will depend ultimately, as we all know—and particularly in the Corps this is one thing that we pay particular attention to—will depend ultimately on quality people. The importance of people transcends all else, people who can endure rigorous training, accept firm discipline, respond to sound leadership and perform intelligently and effectively.

We have been putting our money up front, so to speak, by assigning our very best marines to recruiting duty. We have our act together. We know how to do it. They have performed magnificently, recruiting only those individuals capable of upholding our standards.

QUALITY OF CORPS

The quality of the Marine Corps is assured through uncompromising adherence to high standards of performance, conduct, appearance, and physical fitness. Your Marines passionately seek to serve their country and to serve it well. I know this not only from statistics and reports that are given to me, but I also know it from the look in their eyes, the way they carry themselves, and from the spirit they manifest.

It is that spirit which sets Marines apart. It is a spirit which disavows defeat, fatigue, and repeated hardship.

During the past year, I have visited your Marines around the globe—from the Mediterranean to Japan, from the Baltic to Australia. They are enthusiastic, high-spirited, training hard and, most importantly, they are ready, willing, and able to deal with the task at hand.

This committee knows better than anyone else in Washington perhaps that defense is not cheap. But in this business, second-best is not good enough. The price of an adequate defense obviously and in fact can be quite burdensome. The price of an inadequate defense, however, can be sheer disaster.

With your support the corps will continue to be the world's premier force-in-readiness, willing to accept the challenge; ready to respond when called; capable of doing whatever needs to be done.

Mr. Chairman, and my friends on this committee, I will shortly end 41 years of service as a marine. I am proud of that service but I am particularly proud of the state of your Marine Corps that I report to you today. I am most especially proud of the relationship of trust and confidence that has existed between us during my tenure as Commandant.

Thank you very much, sir.

[The prepared statement of Gen. Robert Barrow follows:]

PREPARED STATEMENT OF GEN. ROBERT H. BARROW, USMC

COMMANDANT OF THE MARINE CORPS

Mr. Chairman, distinguished members of the Committee:

Once again I am gratified with the opportunity to report to you on the present and future posture of your Corps of Marines.

This represents my final report to you as Commandant of the Marine Corps. For more than forty years, it has been my distinct privilege to wear this uniform in the service of our great Nation. I have been granted the honor, the highest honor, of sharing the title Marine with thousands of others who have proudly worn the same uniform in war and peace. During my watch, this country has endured three wars and experienced countless other occasions where Marines have acquitted themselves with unchallenged professionalism and undiminished esprit. As I look to the future, I am confident in the sure knowledge that those qualities which have always set Marines apart will remain unchallenged and undiminished.

Today, the Marine Corps is as capable and ready as we have ever been. All indicators are positive. They clearly demonstrate that the Corps is sound and thriving. The credit for this rests with the selfless men and women who have served, and are serving, to foster our heritage and preserve our legacy. However, they could not have realized their accomplishments without the confidence and support of the Nation and the Congress of the United States. Without your confidence, we could not attract and retain the superb quality of young men and women who fill our ranks today. Without your support, our capability to serve as the Nation's force in readiness would be greatly diminished. Your efforts have resulted in better compensation and benefits, better equipment and, in the final analysis, a better and readier Marine Corps--a Marine Corps capable and prepared to meet the challenges of today and of tomorrow. I assure you, a more cost-effective investment in national security is not available.

The challenges to our vital national interests, and to those of our allies, will require strong maritime responses--responses which are reflective of a strategy of maritime superiority and which rest on the solid foundation of American and allied seapower.

American seapower can, and must continue to, meet the first challenge--the threat to our vital interests posed by global uncertainties and unrest. Virtually all of our interests abroad, including our increasing interdependence with Europe and Japan, are inextricably linked to the maritime trade routes, the sea lines of communication, and the strategic maritime choke points. If we are to maintain free access to and through the world's waterways and if we are to protect our access to allies and resources, we must be able to exercise the full range of capabilities inherent to seapower.

American seapower must be equally capable and prepared to meet the second and most ominous challenge--the challenge posed by the rapidly expanding and increasingly capable Soviet Naval forces. The expanding Soviet blue water capability exacerbates the challenge of uncertainty and unrest. It increases the direct threat to our vital interests, challenges free access, and broadens the potential for direct United States-Soviet confrontation.

Credible American seapower can meet these challenges and deter mischief or aggression. Naval forces, Marines and Sailors, represent a major link in the national defense chain of deterrence. Without them, deterrence would surely fail.

The Navy/Marine Corps team, as represented by amphibious task forces, is a primary instrument of deterrence, of diplomacy, and of offensive power projection. Inherent mobility and sustainability permit amphibious forces to concentrate the requisite combat power at the times and places required and then, upon completion of the task, to move on and apply that power elsewhere. The ground and air power projection capabilities which are integral to the amphibious task force are the implements of forcible entry.

Amphibious task forces represent this Nation's most effective and enduring forcible entry capability. Our forces can seize and control strategic choke points and lodgments as well as establish and defend advanced bases As a device for strategic distraction, amphibious task forces constitute a significant force multiplier which, by virtue of their presence alone, can divert, fragment, and constrain major enemy forces.

In employing amphibious task forces, theater commanders have at their disposal a flexible and powerful combined-arms capability which can either operate independently or, in coordination with other Services and allied forces, execute joint/combined operations. I am confident you recognize that such global reach and flexibility can take maximum advantage of Soviet vulnerabilities, provide maximum assurance to our allies and thereby protect our worldwide interests.

These then, are the strategic and tactical advantages associated with amphibious task forces in the application of seapower and the execution of amphibious warfare.

The Marine Corps' fundamental mission is amphibious warfare. To accomplish that mission we provide a Fleet Marine Force (FMF) of combined-arms, including integral supporting air components, which serve as landing forces with the various numbered fleets. We support those fleets by exercising our capabilities to seize and defend advanced naval bases and by conducting land operations necessary to the successful prosecution of a naval campaign. Marine forces supporting the fleets are organized so they are mission capable; that is, they are task organized. Task organization of forces is a basic tenet of amphibious warfare and permits us to "tailor" our forces for a specific mission or location. By so doing, we provide hard-hitting, flexible, and mobile fighting forces which can respond rapidly and economically. In short, Marine Air Ground Task Forces (MAGTFs) provide a significant capability for a comparatively small investment.

However, in order to maintain our unique capabilities, an investment continues to be required. To that end, I wish to outline just what that investment will yield for you and for the Nation.

ENHANCEMENT PROGRAMS

In order to provide a clear picture of our requirements I will detail the Marine Corps' major programs, as well as Navy programs of special interest, within the context of the amphibious assault. Forcible entry from the sea is our most unique contribution to the Nation's defense and is integral to MAGTF capabilities. The initiatives we are proposing are designed to strengthen those capabilities and to maintain our traditionally high degree of readiness and rapid response.

The amphibious assault has five distinct phases: beginning with the planning phase, continuing through embarkation, rehearsal, movement to the objective, and finally, culminating with the assault. While the focus of my remarks will be directed primarily toward the assault and subsequent operations ashore, it is not my intention to minimize the importance of the four preliminary phases. To the contrary, our ability to execute a successful assault is totally dependent on our ability to get there. Getting there is, in turn, dependent upon the availability of sufficient amphibious and merchant shipping which is where I would first invite your attention.

The Marine Corps fully supports the Department of the Navy (DON) goal of a 600-ship fleet. We recognize that implementation of a global maritime strategy requires balanced naval forces--forces capable of influencing events on the seas and of extending that influence ashore for both offensive and defensive purposes. A balanced maritime capability must provide not only the formidable air, surface, and subsurface dimensions of naval warfare but also the ground/air power-projection dimension inherent to the amphibious task force.

Relative to amphibious shipping, the DON mid-term objective is to provide sufficient ships to simultaneously lift the assault echelons (AE) of a Marine Amphibious Force (MAF) and a Marine Amphibious Brigade (MAB). This represents a change from our previous goal of adequate lift for a full MAB in addition to a MAF(AE). This change is indicative of our continuing efforts to achieve realistic lift objectives within the programmed and planned amphibious ship capabilities. To accomplish this we have scaled down the overall lift requirement by shifting a portion of the MAB's combat service support elements--Marines, vehicles, and supplies--to an assault follow-on echelon (AFOE) which will be carried by commercial ships. Accordingly, DON has restated the requirement to reflect the capabilities necessary for the simultaneous lift of a MAF(AE) and a MAB(AE). Although this lift requirement exceeds current amphibious ships' capacities, we plan on a progressive increase in capability as the amphibious force levels improve concurrent with attainment of the 600-ship Navy in the 1990s.

As I look ahead, I am encouraged by the prospects. Amphibious shipbuilding programs are on track and directed towards revitalizing our amphibious capability. This represents an opportunity to truly modernize a large portion of the amphibious force. The first two ships of the LSD-41 Class are on the building ways. The Navy currently plans to build at least 10 LSD-41s, and the total result may be 13 to 17. The LHD-1 Class--essentially an LHA altered to allow transport, launch, and recovery of both fixed and rotary wing aircraft--is in the contract design stage. The Navy is requesting funds in the Fiscal Year (FY) 1984 budget to build the first LHD. Both the LSD-41 and LHD-1 Class ships will have the capability to carry the landing craft, air cushion (LCAC).

Finally, and although still in the conceptual stage, the Navy is taking a hard look at increasing the cargo carrying capacity of future amphibious and support ships. Concepts ranging from an LSD-41 variant to a new attack cargo ship are being studied.

Perhaps the most innovative strategic mobility initiatives we are sponsoring are those associated with the pre-positioning concept. Our pre-positioning programs, both land and maritime, provide new dimensions in the Nation's capability to rapidly deploy and sustain Marine combined-arms teams on a global basis. They represent mobility enhancements which serve as prescriptions for the rapid employment of credible, sustainable forces into permissive environments. These programs are designed to complement, not replace, our forcible entry capability, which remains the backbone of power projection. In time of crisis, Marines would be airlifted to a contingency area for link-up with pre-positioned supplies and equipment and to subsequently form for combat.

The Maritime Pre-positioning Ships (MPS) program will provide forward deployed, floating depots of equipment and supplies to support three brigade-sized MAGTFs. In the near term, the Marine Corps has placed equipment and supplies for one brigade-sized MAGTF aboard Military Sealift Command chartered vessels. This near-term capability will remain on-station until replaced by the third of the more mature MPS task groups.

MPS task groups will be comprised of specially designed and outfitted vessels termed T-AKX. They will expand our current capability by providing a self-load and off-load system for pierside and in-stream cargo discharge. The MPS concept is particularly naval in character and will provide an independently employable force of combined-arms which will be capable of stand-alone operations. This concept provides a wide range of flexible alternatives which make it suitable for:

- preemptive presence,
- reinforcement of an amphibious assault beachhead, other U. S. forces, and/or allies,
- surge support of U. S. forces,
- deterrence and peacekeeping, and
- humanitarian assistance.

Our maritime initiatives are currently tailored to support the deterrence mission within the Southwest Asia region; however, at the same time they retain the flexibility for employment on a global basis.

Concurrently, programming continues for the land pre-positioning of equipment and supplies for a MAB in Norway. As a strategic mobility initiative designed to reduce force closure times to NATO's northern flank, this program has drawn significantly favorable political interest, particularly from the Norwegian government. Your support to complete this program will signal U. S. commitment and resolve within the region and will afford the National Command Authorities (NCA) an additional option for committing Marine forces quickly. A United States/Norwegian storage agreement was signed on 6 October 1982, and initial deliveries of supplies and equipment commenced in November 1982.

Concern for the Nation's ability to move forces rapidly has been central in Marine Corps planning to reach the crisis area expeditiously, ready, and equipped for the mission assigned. Through such mobility enhancement initiatives, we remain in the forefront, poised and prepared to rapidly implement actions in support of our national interests.

Turning now to the assault phase, I'll continue by discussing the very critical period that precedes the landing of the landing force. During this period, it is essential that we initiate the process that will lead to our gaining relative combat superiority over the defenders. Prior to landing Marines in assault waves, the only fire support means available are naval gunfire and aircraft. Both are critically important. The integration of their supporting fires is vital to our success during the early stages of the assault.

Naval gunfire provides readily available, all-weather, direct and indirect fire support and is the primary means of that support before artillery and tanks are operational ashore. Currently, our naval guns are deficient in size and number and are considered inadequate for all but selected scenarios. Our current naval gunfire capability rests solely on five-inch guns with conventional ammunition. This capability is adequate for soft targets within range but these weapons possess limited range and lethality. It is imperative, then, that our naval gunfire be sufficient to provide efficient and effective support to the landing force. The 155mm Vertical Load Gun would go a long way in providing such support. Additionally, the five-inch and 155mm semi-active laser-guided projectiles (SAL-GP), in conjunction with the SEAFIRE targeting system, can do much to alleviate the problem.

The reactivation of the IOWA Class battleships will be a major improvement in the area of naval gunfire support as major caliber guns are reintroduced to the fleet. At a cost significantly lower than new construction for a lesser ship, the USS NEW JERSEY, for example, provides massive firepower capabilities. I strongly support the reactivation of the remaining three IOWA Class battleships.

Aviation initiatives directly related to gaining and maintaining relative combat superiority, as well as air superiority, rest with the AV-8B and F/A-18 programs.

Last year I stated that the AV-8B was vital to Marine Aviation's modernization program. It continues to be so today. Because of your strong support, the 32 aircraft requested in FY84 will continue the march toward a 1985 Initial Operating Capability (IOC). At present, four Full-Scale Development aircraft are in flight testing with impressive results. We are committed to our ultimate goal of an all V/STOL light attack force, and are convinced that it will provide us the most flexible, responsive, and effective close air support capability in existence.

The first three F/A-18 Marine Fighter Attack squadrons are standing-up at MCAS El Toro, California. The Marine Corps strongly supports the F/A-18 program as a replacement for the aging F-4s in our 12 active fighter/attack squadrons. The capabilities of this superior aircraft allow us to meet the fighter requirements of the modern battlefield as well as provide reinforcement for our attack squadrons when the situation dictates.

During the critical movement from ship to shore, whether in the helicopterborne or surface assault echelons, we require maximum use of supporting arms--and maximum speed and efficiency in execution of this vital phase of the amphibious assault. Having discussed the supporting arms aspects, I'll turn to those programs designed to enhance the manner in which we execute the assault.

The Navy's LCAC program represents a revolutionary breakthrough in ship-to-shore movement. Current projections envision a force of about 100 of these advanced surface craft. The first six LCACs are under contract and the first LCAC base, at Camp Pendleton, California, is under design in preparation for the craft's delivery in 1986. The LCAC provides a quantum advance in amphibious capability by reducing our vulnerability and increasing our speed and flexibilty. Its speed of over 40 knots and its 60 ton payload also provide us with a unique tactical opportunity for surprise landings from over the horizon onto widely separated beaches. LCAC will make the enemy's ability to defend far more difficult and vastly increase our flexibility and speed in the assault.

Assault amphibious vehicles, the workhorse of the amphibious surface assault, serve to further reduce our vulnerability during the critical ship to shore movement and improve our mobility on the battlefield. The assault amphibious vehicle Service Life Extension Program (SLEP) is intended to extend the utility of the LVT-7 into the 1990s. In addition to an extensive rebuild effort, the SLEP will add many new systems and components. Among these will be a new engine, non-integral fuel tank, and all-electric weapons station. The first Marine unit to be equipped with the new LVT-7A1 will be operational in FY84.

The Landing Vehicle Tracked (Experimental) (LVTX) is under development as a follow-on for the LVT-7A1. The new LVTX will provide increased firepower, improved armor, and a lower silhouette.

To enhance our execution during the helicopterborne assault and to improve our maneuverability during subsequent operations ashore, our aviation community is also pursuing a number of modernization initiatives.

As I reported last year, our declining inventory of medium lift assault helicopters is of great concern to me. Due to the effects of inadequate performance and peacetime attrition, the aging CH-46 and CH-53A/D force lacks adequate capabilities to meet our assault lift requirements. JVX meets the need for a 250 knot assault transport that is self-deployable worldwide, reducing some of the demand for strategic air and sea lift. The urgent need for JVX stems from the requirement for modern replacements for the current force as well as to avert the critical lift shortfall that would occur if JVX were not introduced in 1991. JVX capabilities will complement those of the LCAC and LVTX. Capable of lifting 24 Marines up to 200 nautical miles, JVX will provide increased stand-off for naval and landing forces, the ability to rapidly penetrate deep into enemy rear areas or to bypass adverse terrain, weather or threats. Thus, JVX offers a quantum increase in strategic and tactical mobility. R&D funds requested in FY84 will lead to delivery of the first JVX in 1991.

Presently we have two squadrons of CH-53E helicopters operational. This aircraft can lift 32,000 pounds, more than any other helicopter in the free world. The FY84 procurement profile supports the immediate goal of three squadrons which, in conjunction with the 5 squadrons operating the CH-53A/D, will minimally meet the current heavy lift requirements. However, the ongoing introduction of the M198 Howitzer and subsequent fielding of the Light Armored Vehicle (LAV) will require additional CH-53Es.

As the lead elements of Marines move across the beach and into the helicopter landing zones, the assaulting infantry battalions will be capable of striking with increased firepower as a result of the introduction of new weapons systems--and they will do so with fewer personnel. Their weapons will include the improved M16A2 rifle, the Squad Automatic Weapon, the Shoulder-Launched Multipurpose Assault Weapon, the Lightweight Company Mortar System, and an improved medium mortar. The first of these smaller, firepower intensive battalions was organized in October 1982, with an additional 14 battalions to be restructured during 1983. Nine more infantry battalions will be reorganized in 1984, and the final three battalions will realize this increase in firepower in 1985.

Having established our assault elements ashore, it is then necessary to secure our positions on the beaches and within the helicopter landing zones and to commence expanding those positions prior to the thrust for deeper objectives. The most critical threat to our ability to successfully maintain and expand that initial toehold is enemy armor action. Realizing that, and in appreciation of the magnitude of opposing armor and mechanized capabilities, we are sponsoring certain programs to further increase our firepower. Our infantry battalions will engage and defeat enemy fighting vehicles with the MK-19 heavy machine gun. New light anti-armor weapons are undergoing joint Army and Marine Corps evaluation. In addition, our medium anti-armor assets, DRAGONs, will be increased from 24 to 32 per battalion. Half of these new DRAGONs will be equipped with a night sighting capability beginning in 1985.

To provide a heavy anti-armor capability for the assault elements, a new TOW platoon with 24 launchers will be added to each infantry regiment. This will effectively double our heavy antiarmor assets within the division. The new TOW II with a 6" warhead, extended range, and electrical optic countermeasures will be fielded in FY84. Half of the TOW launchers will also have a night sighting capability by FY85.

As the assault waves of infantry clear the beach, heavier landing craft will bring ashore another important anti-armor weapon, the tank. The M60A1, our main battle tank, will end its service life in the early 1990s; however, efforts are underway to either upgrade our present assets or to replace them with tanks providing enhanced anti-armor capabilities.

Additionally, excellent progress is being made in air deliverable weapons which provide outstanding accuracy against armor and other high-value targets anticipated on the modern battlefield. For our fixed wing aircraft, recent Laser Maverick tests have been a total success and we are anticipating an IOC in March 1985. The 25mm Multi-purpose Cannon for the AV-8B also increases our anti-armor capabilities while the Gator mine provides an area denial capability which is essential in a highly mobile, armor-intensive situation. Hellfire has been selected as the primary precision-guided munition for use by our attack helicopters; procurement begins in FY84.

The AH-1T attack helicopter adds another dimension to our anti-armor capability. However, due to necessary resource allocations, the 22 AH-1T procurement, previously scheduled during FY84, has been deferred one year. A procurement schedule of at least 22 aircraft for FY85, with commensurate advance procurement in FY84, is essential.

As the beachhead is sufficiently cleared to allow for the landing and emplacement of additional supporting arms, our artillery is brought ashore. In keeping with our proven doctrine of totally integrating our combined-arms effort, our artillery units will be strengthened by programs designed to enhance their effectiveness in general and, in particular, their anti-armor/mechanized capabilities. Introduction of the M198 155mm howitzer as our primary direct support artillery weapon significantly increases the lethality, range, and accuracy of our artillery units. Accuracy and lethality will be further improved by combining COPPERHEAD precision-guided projectiles with the Modular Universal Laser Equipment. Additional 155mm self-propelled artillery will be added to the force, not only increasing the numbers of artillery pieces available but also providing additional mobility to support the fast moving aspects of the battlefield of the future and furthering our anti-armor/mechanized capabilities.

A second, and equally critical, threat to our successful establishment of Marines ashore is the enemy's air attack capabilities. The steady expansion of Soviet attack capabilities, illustrated by weapons systems such as the HIND-D and MIG-27, demands improved air defense protection for our front-line Marines as well as our vital rear area installations. These requirements are being addressed as quickly and economically as possible through the acquisition of IHAWK systems and Stinger missiles.

In order to integrate these offensive and defensive systems into a cohesive, responsive, and lethal fire support team, we must possess the means to control and coordinate their diverse capabilities. MAGTFs are organized, equipped, and trained to operate in a totallyintegrated combined-arms structure, thus providing our commanders the capacity to control all elements of the team including ground combat, aviation, and logistics. To that end, unique command, control, communications, and intelligence (C3I) capabilities are required. The following programs for C3I systems will satisfy that requirement.

The Position Location Reporting System (PLRS) is designed to provide commanders and equipped units with instantaneous friendly position and navigation information. PLRS will interface with the Marine Integrated Fire and Air Support System, a real-time processing system which will be available in FY88 to provide commanders selective automated assistance to efficiently employ supporting arms at all echelons of the MAGTF. Our Tactical Air Operations Center-1985 (TAOC-85) is a modular, state-of-the-art, real-time air control system that will manage airspace and coordinate and control both interceptor aircraft and surface-to-air missiles. This system will also serve as the initial host platform for the Joint Tactical Information Distribution System (JTIDS). JTIDS, when fully implemented in this and other followon systems, will provide a high-capacity, secure, jam-resistant data distribution capability for the real-time exchange of tactical information within the Marine Corps and with other United States and NATO forces.

Recent events validate my comments of last year regarding the great strides being made in our Tactical Exploitation of National Capabilities program. Marine Air-Ground Task Forces throughout the world, some of which have only limited organic reconnaissance capabilities, are now receiving national intelligence systems support on a regular and continuing basis. The value of national collectors, in combination with theater and organic systems, was highlighted by the vital and effective intelligence support provided to our Marines deployed to Beirut, Lebanon. Finally, we have a clearly defined requirement to improve our tactical intelligence capabilities. Congress has recognized our deficiencies, and those of the other Services, and has taken steps to ensure the resources are made available to correct them. The status of the Marine Air-Ground Intelligence System offers proof. The heart of the system, the Intelligence Analysis Center, is now in procurement and a 1985 IOC is assured. The full field deployment of the Marine Air-Ground Intelligence System will significantly enhance our ability to support tactical commanders. Our all Source Imagery Processor will allow the commander to receive and process in near real time multi-source imagery from national as well as his own tactical imagery sensors. Additionally, we are in the process of upgrading and enhancing our Signals Intelligence and Electronic Warfare Systems to improve our tactical and strategic intelligence collection capabilities.

Once we have solidified our positions on the beaches and within the landing zones, we are prepared to move inland to seize control of landing force objectives and consolidate the force beachhead. On the modern battlefield such a thrust requires a high degree of mobility. Tactical mobility provides the means to rapidly close with and destroy the enemy and to logistically support Marines in a highly mobile environment. There are two ground acquisition programs intended to improve our battlefield mobility in addition to those programs related to the LVT-7A1 which I have previously discussed.

First, a new dimension will be added to the battlefield in FY83 with the activation of the first Light Armored Vehicle Company.

This unit is the forerunner of a highly mobile, firepower intensive maneuver element which is going to be added to the Marine division and which will be unique because of its integrated combined-arms capability. These maneuver elements will be formed around a family of eight mission-role vehicles, all built on a common chassis. The light armored vehicles in each LAV organization will not only be strategically transportable but, when the situation dictates, helicopters will be able to move them deep into the enemy's rear area to seize key objectives.

Second, the High Mobility Multipurpose Wheeled Vehicle (HMMWV) is a new multi-functional vehicle which will streamline maintenance, training, and logistic support. Functionally, it will serve as a weapons platform, a communications vehicle, and a multipurpose logistics carrier. Perhaps most significant are the cost efficiencies offered by this new family of vehicles. HMMWV will replace seven types of motor transport vehicles currently in the inventory and, by doing so, will virtually halve that inventory (26,000 current vehicles will be replaced by 14,000 HMMWVs) while simultaneously increasing tactical mobility.

Finally, during the fight to consolidate the force beachhead and those subsequent operations ashore necessary for the accomplishment of a given mission, we must be capable of sustaining our combat power. Once deployed, our Marines must be able to stay and fight. Sustainability, in combination with weapons systems and people, is a necessary ingredient of our force projection capability.

Marine Corps requirements to lift the war-fighting equipment and supplies of the assault follow-on echelon (AFOE) have grown with the overall growth of our MAGTFs' combat ~~power~~ which, in turn, has been necessarily increased to counter the growing threat of the modern battlefield. With the growth in the assault echelon limited by the availability of amphibious shipping, the AFOE has had to accommodate a larger share of this expansion. Increasing lift requirements for the AFOE have, unfortunately, coincided with a decrease in the numbers of those ships (break bulk, self-sustaining) which have traditionally been utilized to lift that echelon. As the U. S. merchant fleet is moving toward greater numbers of nonself-sustaining container ships, we are moving to similarly configure our logistic pipeline to capitalize on this trend. In that regard, the Navy is planning to acquire Auxiliary Crane Ships (TACS) for in-stream off-load of the newer ships. The challenge posed by the expanded AFOE lies in the coordination required to get a significant number of different types of merchant ships at the appropriate ports in time to embark and sail in short order. The satisfactory solution to this entire equation will require a strong Merchant Marine and our continued coordination with the Military Sealift Command and the Navy.

The momentum of our combat service support enhancement program, initiated during September 1981 through modernization programs, acquisition of new equipment, and manpower and management initiatives, continues on a steady course. Fleet Marine Force Commanders activated ten cadred units in FY82 and will activate five more in FY83 to restore the full spectrum of functional combat service support capabilities we require. The activations include the areas of rations, landing support operations, fuel, bridge, engineer, and maintenance support--all of which are vital to sustaining the landing force ashore.

Implementation of the Marine Corps' Field Logistics System (FLS) continues to be of vital necessity for our sustainability and survivability on today's battlefield. Through FLS, we have begun to replace obsolete equipment while simultaneously improving combat service support. Full implementation is anticipated by FY90.

The FLS in combination with the Navy Amphibious Logistics System forms the Navy/Marine Corps Amphibious Logistics Support Ashore program and will result in equipment savings due to commonality of equipment and repair parts support, increased use of commercial items, decreased training requirements, and improved effectiveness. FLS is designed around international dimensional standards in order to be able to use all modes of transportation, especially the containercapable merchant fleet.

This system, combined with the aforementioned combat service support enhancement initiatives, represents significant improvements which will provide the Marine Corps with a new dimension in logistics support capabilities and will considerably enhance our Fleet Marine Force sustainability and combat readiness posture.

I'll turn now to an area that causes me considerable concern-medical support. Amphibious operations in a high intensity environment will involve large numbers of casualties requiring immediate treatment and surgery. Under most contingency scenarios, the bed capacities and surgical capabilities found in the amphibious task force and landing force units would be overwhelmed early in the engagement. To correct this deficiency, I consider it imperative that continued emphasis be placed on the Navy's development of the Fleet Hospital program and the Hospital Ship program. The Navy's Rapidly Deployable Medical Facility, with a 1000-bed capacity, is scheduled for implementation in June, 1983. This is a positive start. The Navy Fleet Hospital program will provide 11,250 beds configured in 250, 500, and 1000-bed field hospitals to help resolve the critical shortage of in-theater medical support. The Marine Corps applauds the Fleet Hospital program; however, the global mission of our Corps requires the flexibility of sea-going medical support. Hospital ships, on-station with the amphibious task force, are required to deal with Marine and Navy casualties requiring immediate treatment before the beachhead is secure enough to implement a field hospital. During World War II, the Navy had 13 Hospital Ships. Today there are none and the need is critical.

MANPOWER

Up to this point, I have directed my remarks to the programs and equipment that will enhance, modernize, and maintain the deployability, combat readiness, and sustainability of the Marine Corps. The program I will now discuss, manpower, is the Marine Corps. It is my number one priority.

By the end of FY84, our manpower program calls for an end strength of 197,300--an increase of 2,700 over the FY83 level. The requirement for additional personnel is primarily tied to the weapons and equipment modernization and enhancement programs I have previously discussed. However, not all new weapons and equipment require more Marines. As mentioned, weapons and equipment additions to the infantry structure are allowing us to reorganize into smaller infantry battalions with greater firepower. The net result of our structural and manpower changes will permit us to increase manning levels slightly throughout the active force structure. Examples of specific increases which will be generated by our FY84 manpower program include the reactivation of certain combat service support units, the activation of a Light Armored Vehicle unit, the reorganization of our artillery regiments, and the addition of Light Antiaircraft Missile batteries.

Quality personnel, in sufficient numbers, remain the key to maintaining the readiness and combat capabilities of Marine operating forces. [illegible] continue to meet our accession requirements in both quality and quantity. Eighty-five percent of our FY82 non-prior service accessions were high school graduates. More than 90 percent of those individuals were in the top three Armed Forces Qualification Test (AFQT) categories as measured by the Armed Services Vocational Aptitude Battery (ASVAB). In accordance with Congressional direction, all AFQT Category IVs are high school graduates. These recruiting accomplishments are particularly significant because they were made under the renamed ASVAB test, which corrected the tendency in previous tests to overstate an applicant's mental ability. Quality, rather than numbers, will continue to be the driving force in establishing our recruiting goals.

Our success in recruiting quality Marines in the past few years has been achieved, in part, by assigning our very best Marines to recruiting duty -- one of the most demanding and difficult peacetime assignments. We are committed to this effort and intend to continue this policy. We will be similarly selective in the assignment of instructors to the recruit depots and other training establishments. I am convinced that this near-term investment in recruiting and training will result in long-term benefits to the Marine Corps. The number of Marines assigned recruiter and instructor duties meets the minimum requirements to accomplish these important tasks, and I urge your continued support for the recruiting and training overhead levels requested.

Reenlistment of proven, quality Marines is another key part of our manpower program. During FY82, 15,051 Marines reenlisted. Our continuing emphasis on quality, the general state of the economy, and the improving national attitude toward military service have contributed to an excellent reenlistment year. A continuing concern, however, is our ability to retain Marines who have the skills needed to overcome critical shortages in various specialties or who can be retrained in those areas. The Selective Reenlistment Bonus (SRB) program is absolutely essential to fill identified shortages with high quality Marines. To this end we have developed a capability to target bonuses to specific Military Occupational Specialties (MOSs), rather than the more general Occupational Fields, giving us an exceptionally efficient and effective program. Our SRB program, in other words, is a success. From July 1980 to July 1982 the shortfall in Marines needed to man all MOSs at 85 percent of requirement, or better, was reduced approximately 40 percent. With your continuing support I am confident that even greater improvements will be made.

As with enlisted accessions, we continue to meet our annual officer procurement requirements. I am concerned, however, that because of the great improvement in retention in the past few years we will exceed the maximum promotion timing guideline given by Congress for the grade of major beginning in FY85. Without appropriate grade relief, the promotion timing for this grade will continue to steadily increase beyond the promotion window fixed by Congress. As provided by the Congress, we are requesting through DOD a modification to the grade table established in the Defense Officer Personnel Management Act which will raise the current ceiling on the number of Majors that may be serving on active duty. This increase, only for the grade of major, will permit us to do two things. First we will be able to remain with the DOPMA management parameters. Second, we will be able to man a number of important billets external to the Marine Corps which support various DOD activities. Your support for this modification, which should reach you later this year as part of the substantive amendments to DOPMA, is essential and requested.

In FY82 military compensation attained comparable levels with the private sector. In FY83 the pay raise was capped at 4 percent, 50 percent below the level needed to maintain comparability by accepted measurements. The necessity to restrain government pay increases during times of overall national economic difficulties is recognized and the Marine Corps supports the Administration. As the ecomomy does improve, however, I would urge that we return to our comparability goals. In the long run, Marines, and all military people, must be compensated at a rate that avoids the immensely expensive loss of experienced people which historically occurs when military compensation is permitted to fall behind that of the private sector.

"Quality of life" initiatives also directly affect retention and readiness. These initiatives embrace a wide variety of programs reflecting the Marine Corps' commitment to improving the human dimension of military service, that is, the working, living, and recreational conditions of our Marines. These programs include increased construction of improved bachelor and family housing, maintenance and training facilities and morale, welfare, and recreation facilities; continued development of Family Service Centers to assist Marines and their families; enhancement of dependent medical benefits and beneficiary awareness of the value of benefits and available services; increased educational benefits; and continued emphasis on fair treatment and equal opportunity for all Marines.

An area of particular concern to me, and one which I addressed last year, is the frequent family separations that we require of Marines in order to maintain a forward deployed posture in the Western Pacific. Our presence in Japan is necessary but I remain convinced that it can be maintained without adding to the sacrifices we already ask our career Marines to make. Consequently, I am committed to increasing the number of Marines serving in accompanied tours on Okinawa and at Iwakuni. Over the next few years, we intend to permit career Marines in Japan to elect accompanied tours--excepting those in specially designated ground and aviation combat units that deploy on a regular basis from their home stations. We will progress deliberately, pacing the transition to available housing. I am confident that the impact of this decision on Marine families and on the retention of quality career Marines will benefit generations of Marines to come.

Civilians represent a vital and major element of our total manpower requirements. Our FY84 request for 21,618 civilians satisfies only minimal requirements. The civilian component permits us to more effective man the FMF with Marines; provides continuity in the base and supporting establishments; and enhances FMF training, readiness, and sustainability.

I reported last year that we had launched a determined and concentrated campaign to eliminate the use of illegal drugs in the Corps. My policy remains plain and simple: the distribution, possession, or use of illegal drugs is not tolerated in the United States Marine Corps. The welfare of the men and women in my charge is a deep commitment, embedded from my earliest days as a Marine, and I am totally committed to ridding the Corps of this threat to its well-being. The key is leadership. We have that leadership-and we are making progress.

The manpower program in the active force is doing well. Accession goals are being met by quality individuals and improved retention is allowing us to keep the quality Marines we need. Our emphasis on quality and adherence to standards is providing us with a talented, efficient, and capable force--a Marine Corps of which I am extremely proud.

MARINE CORPS RESERVE

Sharing fully in the Total Force concept, the Marine Corps Reserve provides one-third of the manpower and one-fourth of the structure available for mobilization. Our Ready Reserve, consisting of the Selected Marine Corps Reserve (SMCR) and Individual Ready Reserve, is the primary source of this manpower. The SMCR forms the Fourth Marine Division-Wing Team, balancing combat, combat service, and combat service support forces which are ready to provide the trained units and individuals needed to bring the active Fleet Marine Force to full wartime capability. Prepared to augment, reinforce, or provide a Marine Air Ground Task Force, the SMCR rests on a solid foundation upon which we intend to build.

Readiness of the Reserve forces has continued to improve. During FY82, Marine Corps reservists participated with active duty Marines in joint/combined exercises in Korea, Iceland, Denmark, Germany, and the Caribbean and sharpened their skills in seven major Reserve exercises in CONUS. Of the units tested for combat skills, 90 percent were found combat ready using active force criteria. Initiatives to improve mobilization readiness were tested during the recent JCS exercise "Proud Saber" as well as 131 separate unit mobilization tests. Results indicate considerable improvement in our mobilization capability over previous years.

Our concerns with personnel readiness and quality are paramount. In keeping with Congressional and Defense guidance to achieve wartime strengths in the Selected Reserve, we are requesting authority for an average SMCR strength of 40,300 in FY84. Approval will provide for planned and programmed growth. Our optimism that the SMCR could achieve wartime strengths by the middle of this decade was validated when it attained 105 percent of the planned FY82 end-strength of 38,540, ending the year with a total paid strength of 40,461. Personnel readiness has been augmented by expansion of the Full Time Support (FTS) program with FTS personnel now being assigned to seventeen major commands, including Headquarters, Marine Corps. FTS end-strength is programmed at 801 in FY84.

The goals of procuring, issuing, and maintaining combat standard equipment for SMCR training allowances are being met. However, the additional equipment requirements that are programmed to be held at either Albany, Georgia or Barstow, California until required by mobilization are not adequate to satisfy Total Force needs. FY83 procurement funds are being used to reduce these shortages and, assuming that programmed funding levels remain intact, equipment deficiencies will be largely resolved by FY88.

During FY82 a structure modernization effort was begun to align the 4th Marine Division's structure with that of its active counterparts and to increase the combat service support capability of the 4th Force Service Support Group.

The need for a modern Reserve aviation component is emphasized by the recent tasking of Reserve squadrons to prepare for contingencies previously assigned to active units. Though newer aircraft are programmed for the Reserves, aviation readiness continues to be affected by aircraft shortages, principally in KC-130 refuelers and AH-1 helicopters, as well as the problems associated with aging aircraft.

As the Marine Corps Reserve requirements to augment, reinforce, or provide a MAGTF in support of various worldwide active force contingency missions expand, our efforts to improve Reserve readiness will also expand.

READINESS, TRAINING, OPERATIONAL PERFORMANCE

The Marine Corps remains ready to respond to all assigned missions. Readiness has always been, and continues to be, the highest priority for Marines. Our emphasis on readiness is evident in the array of Marine Air Ground Task Forces which are, at this moment, fully combat ready and prepared for immediate contingency deployment. Forward deployed MAGTFs are the root source of our versatility, flexibility, and readiness.

A key element in the readiness equation continues to be operational performance standards. Our standards remain uncompromising; our individual Marines and combat units would acquit themselves well if required to fight today. As Marines continue to deploy and exercise in all corners of the globe, we continue to emphasize readiness for amphibious operations and subsequent combat ashore. Even before these units deploy, we evaluate their capability to accomplish their assigned missions through the rigorous Marine Corps Combat Readiness Evaluation System. This system objectively evaluates the combat readiness of all active and reserve FMF units.

A second factor is the relationship of new and improved equipment to enhanced readiness. I can report with confidence that our current equipment readiness is the best it has been for many years. Improvements in personnel, equipment, and spare parts have been substantial. However, complete fulfillment of both our readiness and sustainability requirements, in all areas, is most important.

A third factor in the readiness equation is the training of Marines. I am convinced the well trained Marine remains the most important element for success on the battlefield. To ensure that we have the best trained Marines possible, a determined effort must continually be made to improve upon the effectiveness of our training system.

The Marine Corps' training system is designed to train individual Marines and Marine units, both active and reserve, for combat. To maintain our high state of readiness, we continue to emphasize mission-oriented collective training. This training brings together the individual and collective skills of Marines and is directed toward refining the FMF's capability to conduct amphibious landings and subsequent operations ashore as a part of the Navy/Marine Corps team. Our MAGTFs participate in a wide variety of mission-oriented training exercises each year. One such exercise is the combined-arms training conducted by 10 Marine battalions each year at the Marine Corps Air Ground Combat Center, Twentynine Palms, California. The harsh expanse of desert at Twentynine Palms provides a maneuver area sufficient to permit the full integration of our combined-arms, air ground team in realistic live fire exercises. Another example is participation by approximately 10,000 Marines each year in cold weather and mountain warfare training at the Marine Corps Mountain Warfare Training Center, Bridgeport, California. This training center provides an ideal location to train Marines for our strategic roles in the Northern European and Western Pacific regions which have mountainous terrain and cold weather environments.

We also train regularly with our allies. This training fosters a spirit of cooperation with our allied counterparts and allows us to benefit from their particular expertise. Marines receive jungle training with British Royal Marines in Borneo and arctic training in Norway as well as cross-training with our friends and allies globally.

Marine Corps aviation units also participate in a wide range of collective training programs. The electronic warfare/close air support test program conducted with the other Services provides invaluable training and insight into today's high-threat environment. Ongoing participation in Air Force RED FLAG exercises provides Marine crews with a realistic air combat environment. At the Marine Aviation Weapons and Tactics Squadron, located at Yuma, Arizona, Marine crews from our entire aircraft community, along with personnel from other Services, learn to plan and fly in a combat scenario that demands cooperation and coordination.

Success in any of our collective training efforts is directly related to the effective training of our individual Marines. Recruit training remains the fundamental element of our success and is the first step in a program designed to prepare the individual Marine for combat or garrison duty. It challenges our recruits--male and female--to achieve the highest standards of military skills. I believe we succeed in this effort because the challenge of recruit training comes from a series of demanding but attainable performance requirements. Since recruit training is extremely demanding, I require the highest standards from our drill instructors and accept no deviation from these standards. Recruit training continues to receive my close personal attention.

While we will continue to modernize many areas of training, I am satisfied that our programs remain fundamentally sound. I consider training to be a key factor in the combat readiness of the Corps and believe that a well trained Marine is vital to the effectiveness of the Navy/Marine Corps team and the interests of our Nation.

Because of readiness and training, the Navy/Marine Corps team continues to operate as a totally integrated force currently deployed worldwide in support of national policy, demonstrating resolve to our allies, and serving as a major deterrent to potential enemies.

The III Marine Amphibious Force, forward deployed in Okinawa and Japan, provides presence in the Far East and is available for rapid reinforcement or response to the Southwest Asia (SWA) region. III MAF assets include the 31st Marine Amphibious Unit (MAU), which is continously forward deployed afloat in the Western Pacific and Indian Ocean. The Near Term Pre-positioned Force, with 7th Marine Amphibious Brigade equipment embarked, remains strategically staged at Diego Garcia to augment our mobility capability for rapid closure of our forces into Southwest Asia.

Located on the East Coast is II MAF which forward deploys a MAU in the Mediterranean Sea on a continuing basis. This MAU frequently visits the Indian Ocean. Additionally II MAF annually deploys a MAU or MAB to Northern Europe for training and joint/combined exercises, and deploys similar MAGTFs to the Caribbean.

I MAF, located on the West Coast, is tasked with the responsibility for developing plans for deployment and employment of Marine forces in SWA. Moreover, I MAF, in coordination with II MAF, provides combat elements for III MAF on a rotating basis for both deployed MAUs and Okinawa/Japan based forces through the Unit Deployment Program.

The Navy/Marine Corps team has recently exercised in a number of Mediterranean countries; in Europe; throughout the Pacific Ocean area from the Aleutian Islands to Australia; in the Caribbean Sea; and with our friends and allies in South America. This winter, Marines landed in Oman for an amphibious landing exercise and cross-training with the Omanis. These exercises amply underscore the inherent flexibility and capability, both seaborne and airborne, of Marine forces to move to and operate in varied geographic environments and under extreme weather conditions. In addition, Marines have participated in a variety of humanitarian assistance projects and are, as you know, currently participating as part of the Multi-National Peacekeeping Force in Lebanon.

FINANCIAL RESOURCE MANAGEMENT

The financial resources allocated to support the programs and budget items discussed above (and displayed in Tables I and II) represent virtually no real growth in the aggregate over fiscal year 1983. A comparison of fiscal years 1983 and 1984 is contained in Table I:

Table I
($ in millions)

APPROPRIATION	FY 1983	FY 1984
Military Personnel Marine Corps	3,331.0	3,462.9
Reserve Personnel Marine Corps	170.9	177.3
Operation & Maintenance Marine Corps	1,469.6	1,575.9
Operation & Maintenance Marine Corps Reserve	51.1	53.6
Procurement Marine Corps	1,977.4	1,852.0
Marine Corps Stock Fund	11.8	22.3
Total	7,011.8	7,144.0

The funding requested for FY84 finances two main goals: improved overall readiness and achievement of adequate levels of combat sustainability. The very fact that there are no "new starts" reflects these priorities. To this end, there is real growth in the operations accounts and stock fund--as I projected in my last report to you. This vital increase primarily supports the operation and maintenance of new items of equipment currently being integrated into the operating forces.

The fiscal 1984 budget request preserves the Marine Corps' reputation for austerity. It has been scrutinized for excesses, not only within the Marine Corps, but also within the Departments of the Navy and Defense. As a result, the Marine Corps' contribution to the maintenance of peace continues to be significant while our consumption of resources remains relatively small. And, as I stated earlier, a more cost-effective investment in national security is not available.

Table II highlights the Marine Corps' fiscal 1984 authorization requests:

Table II
($ in millions)

CATEGORY	FY 1983	FY 1984	FY 1985
Active Duty End-Strength	194,600	197,300	199,000
Selected Reserve Average Strength	40,245	40,300	42,500
Civilian Personnel End-Strength (USMC Portion of DON Request)	21,338	21,618a/	21,733
Average Military Student Training Load, Active	20,204	21,105	21,185
Average Military Student Training Load, Reserve	3,070	3,223	3,223
Procurement, Marine Corps	1,997.4	1,852.0	2,172.4
Operation and Maintenance Marine Corps	1,469.7	1,575.9	1,856.1
Operation and Maintenance Marine Corps Reserve	51.1	53.6	58.2

a/ Includes 19,962 O&MMC, 211 O&MMCR and 1,445 MCIF

CONCLUSION

Having detailed the present and future posture of your Corps, I wish to reemphasize both the maritime imperatives and that which constitutes the essence of the Marine Corps.

The realities of this Nation's economic system, coupled with our geopolitical position vis-a-vis the free world, dictate a requirement for unchallenged maritime strength--a strength that has its foundations in the commercial and industrial institutions of our society. A vigorous shipbuilding industry and a thriving Merchant Marine are necessary ingredients for strong Naval forces and maritime superiority. These, in turn, are vital to the Nation's prosperity, our security, and the maintenance of international stability and peace.

We in the Marine Corps are encouraged that the Congress and the people of the United States support us as we serve to deter aggression and maintain the peace. You may be assured that we will continue to be deserving of that support. You may be equally assured that the Marine Corps will continue to be faithful in fulfilling our most important obligation--the obligation of providing quality leadership to America's sons and daughters.

In the final analysis the Marine Corps is people and we, their leaders, are entrusted with their physical and moral welfare. Your leadership and support have steadfastly provided the means to recruit, train, and equip these superb young men and women. Congressional wisdom and vision have fostered the conditions which permit Marine officers and noncommissioned officers, the role models, if you will, within our Marine Corps family, to continue to instill sound values and those enduring qualities of service, selfless dedication, and patriotism which our Marines will carry throughout their lives both as Marines and as citizens of our Nation.

We are providing America's youth a challenge--and they are responding magnificently. I see it in their faces, I hear it in their words--it is evident to the world in their performance. During the past year, I have visited your Marines around the globe from the Mediterranean to Japan, from Norway to Australia. I can assure you they are as capable and ready as Marines have ever been. They remain faithful to the special trust and confidence placed in them by the American people. The continued support of the Congress will keep them capable and ready. Their spirit and dedication will keep them always faithful.

That concludes my report. Thank you.

TRIBUTES TO USMC COMMANDANT

Senator **Stevens** [presiding]. General, I am delighted that I got here in time to hear the balance of your statement. I do apologize for being late.

I think I will first yield to the Senator from New Hampshire for a comment upon your retirement.

Senator **Rudman**. General Barrow, I just want to say to you that in the 2 years I have served on this committee, I have always looked forward to your appearance. Of all the witnesses I think we have—and with great respect for the others—your frankness and your candor, and the spirit that you bring to your testimony is very refreshing.

I will say to you what I have said to several others, it is a shame in a way that we have the system that we have. You have served 41 years, going back to the early days in China as a private, and commissioned. You have served in every major place the Marine Corps has served. You have a record that is second to none. We owe you a great deal.

I just want to tell you that I regret that this is your last appearance before this committee. We certainly wish you well in whatever you choose to do.

General **Barrow**. Thank you, Senator Rudman.

Senator **Stevens**. Senator Johnston.

Senator **Johnston**. Mr. Chairman, I want to say that General Barrow has made the Marine Corps proud, he has made the country proud, but he has particularly made those of us in Louisiana proud.

He is, I will not say a typical Louisianian but he reflects the best that we like to strive for. We are exceedingly proud of your 41 years, a distinguished record, General Barrow.

I am personally very sorry it has to end but that is the system. But I look forward to your return to St. Francisville, to your active participation in affairs in Louisiana. I must say that we have never had a more distinguished witness before this committee or a more distinguished and outstanding Commandant of the U.S. Marine Corps.

Thank you for what you have been to our State, but most of all to this Nation.

General **Barrow**. Thank you, Senator.

Senator **Stevens**. We all thank you, General. You are too young to retire, I have said that before.

Gentlemen, we have 25 minutes and if we each restrict ourselves to 5 minutes I think we can get through. We have a vote at 11 o'clock. Since I came last, I will ask my questions last.

Who was first? Senator Rudman, I guess.

Senator **Rudman**. Thank you, Mr. Chairman. I will keep them brief because of our time this morning and I will submit some questions for the record to our witnesses.

HARM

Mr. Secretary, you have commented publicly about the HARM program lately. I was going to go into that. Could you just briefly tell me at what status you are in your evaluation? Is this one of the programs that we may be seeing written off the board because of its cost?

Secretary **Lehman**. Senator, we are currently very actively looking at the program and alternatives to the program. The program has grown in cost well beyond its original estimates. Part of this is due to an accretion of additional requirement capabilities in range, in coverage of the threat and so forth. In fact, we have achieved a superb missile that, indeed, does do what it was originally projected to do, but, right now, is looking very costly indeed.

We are now in negotiations with the contractor, Texas Instruments. We are also looking at alternatives to take the technology that we have developed and paid for and applying it, perhaps, in less costly packages. So, we will have a fairly coherent and cost-effective program to present within a number of weeks.

Senator **Rudman**. All right, and I expect that we will be hearing from you at that time because that tends to be symptomatic of some of the problems that the Navy, the Air Force, the Army, get criticized for.

I agree, the record you bring here today, I have looked at the cost growth of each of these areas. I watched them very closely. The Navy has done a first-rate job. You have in fact done precisely what you said you would do. It is just when you get this kind of a program it tends to somehow make comparisons with some of the other problems easier for those who want to criticize you. I think this is one that really needs a very close look.

VTX-TS TRAINERS

The second question has to do with the buy of 300 VTX-TS Hawk trainers. Last year, during one of the hearings—and I believe then in written statements—the Navy proposed that rather than spending about $5.5 billion on that trainer that there was a possibility of a life-extension program for that.

If I have it correctly, what you were going to do is take the current fleet of TA-4's and T-2's and do a SLEP program on them for $250 million. You are going to buy 50 more of the T-2's for an additional $15 million each—no, less than that; for $250 million total. That was a $500 million total to bring that training to what you thought would be adequate.

Now I understand that we have gone back to the original plan, that you are planning to purchase the Hawks with tail-hooks for carrier landings, 50 additional Hawks for conventional training for an additional $900 million, and we are back to the $5.5 billion figure.

What happened along the way, Mr. Secretary?

Secretary **Lehman**. Well, Senator, that plan that you outlined was never a Navy plan, but rather a plan of one of the losing competitors in the VTX competition. It never had any attraction to us because it would simply maintain in the force, airplanes like the T-2 and the TA-4 that are very fuel inefficient and have a very high cost of ownership, and only put off for some years the problem of a new trainer.

We believe that we have selected, by far, the most cost-effective and lowest-cost option by going to an existing trainer. The Hawk trainer is far more efficient and easy to maintain than the two we have in the force now. We intend to phase it in in the least-cost way, which is to start with 50 off-the-shelf airplanes that fit very well into the Navy syllabus and later phase into a fully carrier-suitable version, thus avoiding about $1.5 billion of nonrecurring development if we started from scratch.

I can understand the pique of the four or five losing companies and teams in the competition, but I cannot understand their persisting attempts to undo the program.

Senator **Rudman**. I understood that that was a proposal that was seriously considered within the Navy Department. I know the pressure came from contractors.

But you are telling me that was never a serious consideration.

Secretary **Lehman**. It was never given serious approval. It was certainly given serious attention and rejected but it was never for any period accepted as the way to go by the senior Navy officials.

F/A-18 PROGRAM

Senator **Rudman**. General Barrow, I have one brief question for you. Last year you stated—and I quote it exactly for you—that the A-6E with its fine all-weather capabilities was the ground commander's most reliable attack vehicle at night and during periods of reduced visibility.

You said, "I am unequivocally opposed to any decision which would remove A-6E aircraft from Marine Corps inventory." Has anything happened in the intervening year to change your mind?

General **Barrow**. There have been some discussions but nothing has changed my mind. Maybe I should modify "unequivocal." But the point still remains, I think the A-6E is an absolutely superb aircraft. As you have already said, it has an all-weather capability and is the only aircraft in our inventory—five squadrons worth—that has such a capacity. It is a real work horse.

Senator **Rudman**. The real reason I am asking the question, which I am sure you can understand, is the whole dispute on the F-18's and their reported shortcomings in the attack role. There is some talk over at the DOD to cut that buy by a third on the F/A-18's and dispense with some of it and purchase some modular improvements to the A-6E of which we have, I guess, quite a few hundred in inventory.

General **Barrow**. I do not think that the A-6E needs much in the way of improvements and I would like to correct any misconception as to the effectiveness of the F/A-18 in the attack role. For us, the F/A-18 in the attack role is a quantum leap in effectiveness. As you know, we already have one squadron that is commissioned and standing up in El Toro, and two more squadrons will stand up this summer.

Those young men who fly these aircraft—which incidentally I still think is one of the better sources to go to for a good analysis of what is going on—they are overwhelmingly enthusiastic about the way they can get the target with the F/A-18.

It lacks all-weather capability and it presently cannot carry the payload of the A-6 which is why we continue to maintain our interest in the A-6.

Senator **Rudman**. The Marine Corps is not concerned about the range problems?

General **Barrow**. We are not concerned about the range problems because we would be in a position of close proximity to the targets and would probably get multiple sorties and refueling as we rearm. The range would not pose a problem for us.

AEGIS SYSTEM

Senator **Rudman**. Mr. Chairman, I just have one brief question for Admiral Watkins, and that is on the old Aegis program.

There has been a great deal of criticism lately and I do not know if any of it is well founded or not. As is often the case, we sometimes generate within the Pentagon—within all of the collection quota of "hobby shops" that the Secrtetary referred to yesterday—all sorts of criticisms, some of which may be valid.

Now, what about the allegation that we really got a hull surrounding a lot of electronics; that is not stable; that it is not cost-effective; that there are serious questions about its stability in heavy weather. Could you respond to those, Admiral?

Admiral **Watkins**. Senator Rudman, I think it is one of the finest ships the Navy has ever built. It has a hull capable of a maximum displacement under certain battle conditions, including flooded compartments, of 10,200 tons. It came in at 9,600 tons with all equipment on board, including the Spy–I radar which, as you know, the current model is quite heavy. Follow-on models will be lighter.

Its demonstrated performance during tests has been superior. The Board of Inspection and Survey says it is one of the finest ships the Navy has ever received. It is performing well in all modes. The Aegis system has been tested extensively in U.S.S. *Norton Sound,* 65 shots of the Standard missile, both at supersonic and subsonic low-flying drones to give it a capability against the threats of the 1990's, until the turn of the century, that is superior to anything we have afloat today—in fact, anywhere in the world.

I believe the criticisms of CG–47 have been extremely ill-founded. I have been aboard the ship. She is a fine ship. She has tremendous combat capability. If we were to redesign the ship again to insure that we had the maximum survivability, we might do things a little differently as we have planned for the DDG–51.

Perhaps, if we were not driven heavily by costs in choosing the CG–47 hull in the early years, we may have done different things, such as a steel superstructure and having the CIC further down inside the ship.

But in general terms, the margin that we need now in displacement for midlife upgrade is no longer as significant as we used to have in the old ship because the ships of today, as we look ahead into the future, could well be lighter. We are looking at fiberoptics, distribution of our electronics information, and computerization in bringing down the weight of major components.

So, all in all, *Ticonderoga* is a fine ship. She is performing to specified standards. She has been visited by everyone. She has been seen operating by everyone and the tests have been extensive. We will continue those tests. We have a winner.

Senator **Rudman**. Thank you very much, Mr. Chairman.

Senator **Stevens**. Senator Proxmire.

TRIDENT

Senator **Proxmire**. Admiral Watkins, as you know, there have been some rather substantial cost increases and schedule delays in the Trident program. The original cost estimates for the total program was $12.4 billion. By 1980, the cost was estimated at $28.7 billion.

Now, much of that was quantity, you acquired more Tridents than you originally planned acquire. Some of that was inflation, a substantial amount was delays.

My understanding is that Admiral Rickover was responsible for procuring a nuclear propulsion system for the Trident and not the ship, not the missiles.

Can you tell us whether there has been cost growth in the nuclear systems and if so, how much, other than quantity and inflation?

Admiral **Watkins**. Senator Proxmire, let me answer this way. The end cost of the first eight *Ohio* class submarines increased by $1.6 billion.

Senator **Proxmire**. What percentage increase is that, Admiral?

Admiral **Watkins**. I do not have the figure, I will provide that for the record.

[The information follows:]

Admiral Watkins. Trident Submarine Cost Growth

The end cost increase for the first eight *Ohio*-class submarines is 12 percent when economic cost increases due to inflation and escalation are excluded.

BREAKDOWN OF LOST INCREASE

Admiral **Watkins**. I will give you the breakdown of what that cost increase was attributed to. I think that will answer the question.

We did not foresee the substantial inflation over those past 10 years and so there were adjustments in there amounting to $806 million of that or nominally half, for inability to properly estimate the inflation indices. Those have to be applied as you know in the shipbuilding and conversion, Navy account up front as we ajdust them each year.

There were some estimating adjustments on the concurrent production and development which were approved by the Deputy Secretary of Defense in 1973, and they amounted to $150 million of that cost growth.

There were schedule changes that amounted to $626 million, and these were rather significant in the cost growth dilemma and they are probably attributabe to some management problems both at Electric Boat and within the Navy of managing the most complex submarine we have ever built. The ships displace 18,000 tons and are extremely complex.

Frankly, I think there was some growth in changes that were allowed by the Navy that was excessive, also. We know and we have had documented by investigative reports on the amount of quality control problems they had at Electric Boat during that period—fabrication problems with types of steels procured and the like—which contributed a great deal to the cost growth.

In addition, we applied $448 million in cost growth to install the D-5, hard-target kill missile capability in the eariler submarine and you recall that last year before the Congress we asked that we forward-fit the ninth submarine, which is the fiscal year 1981 Trident, to insure that we brought the Trident missile on board—the Trident II missile on board—at the earliest possible date consistent with the IOC of that missile in 1989.

Senator **Proxmire**. Admiral, much of this is details talk. My specific question is whether or not the nuclear propulsion system which Admiral Rickover is responsible for, whether there were overruns there and if so, how big they were.

Now, you are telling me there were schedule delays involved there; is that correct?

Admiral **Watkins**. Yes, sir, that is correct.

Senator **Proxmire**. And what was the cost?

Admiral **Watkins**. I will have to provide that for the record, Senator Proxmire. I do not have the details on the breakout between the nonnuclear components and the nuclear components.

[The information follows:]

Cost of Schedule Delays

The Navy's estimate for *Ohio*-class propulsion equipment did not incur any cost growth due to schedule delays or component/system cost increases. The Navy's fiscal year 1984 Trident Program cost growth request contained $106.4 million to finance increased costs associated with previously announced delivery delays for SSBN 727 thru SSBN 732. These delivery delays were attributed to correction of shipbuilder quality assurance problems and applications of insufficient work force on the *Ohio*-class program.

The Navy's Propulsion Plant cost estimates, as reflected in the Congressional Budget exhibits for SSBN 726 thru SSBN 732, have not grown beyond those in the original budget submits provided to Congress for each *Ohio*-class ship.

Senator **Proxmire**. All right. Now, Mr. DeLauer said before this committee that I was partly responsible for the Trident's problem because of my support of Admiral Rickover.

Can you substantiate that or state whether there are any records, any evidence, showing that I performed any acts that contributed to the Trident's cost and scheduling difficulties?

Admiral **Watkins**. I have looked at most of the records rather extensively over the last 8 or 9 years, Senator Proxmire, and I do not remember that subject being listed as one of the agenda items.

Senator **Proxmire**. I appreciate that because I had said nothing at all about Trident. I do not know where Mr. DeLauer came from on that score. We criticized many other procurements in all the services. The Trident was one that I missed. [Laughter.]

I am glad I did.

Mr. Chairman, I would like to submit for the record of the hearings the correspondence between Secretary DeLauer and myself following his allegations that I was responsible for the Trident's problems. I challenged him to substantiate his charges. He failed to do so.

What he seems to be saying in his letter is that there were congressional hearings on Trident's problems and that these compounded the problem. In his letter—unlike his testimony—Mr. DeLauer does not say that I was responsible for any such hearings.

On the other hand, he seems to be making a new allegation against the Congress, namely:

> Any time contractual differences are aired in the Congress, the resolutions of the difficulties are compounded. The longer the contractual differences are left unresolved, the greater the cost uncertainties become. This was the case with the Trident.

Then he goes on to say:

> My reference to you as being particularly responsible for cost overruns and schedule delay problems on the Trident was not an attempt to shirk any responsibility of the Department of Defense, but recognition of the fact that DOD does not manage its programs alone but in concert with the authorization and appropriation authority and oversight of the Congress.

I think it is a legitimate criticism that the Congress can delay some of these programs sometimes, can cause additional costs. But I think we have to recognize that we have a responsibility.

Oversight is a very important responsibility for us and I would dread to think that we cannot reach an understanding with the Navy and with the other services that we have not only a right but a duty to inquire just as critically as we can into these matters.

In this case, from what you said, they have not been able to detect and indicate that the Congress was responsible for the additional Trident cost.

Admiral **WATKINS**. I do not believe the Congress is in any way responsible. I think we share the burden with the private sector by the types of contracts we were then writing for shipbuilding. That has been significantly changed. As you know, we have absolutely no claims against the U.S. Navy made by any shipbuilder in the country.

We have control of our engineering change proposals now and a very rigid internal discipline that we did not have at that time. I believe there is a lot of blame to go around between the U.S. Navy and the contractor himself.

I think we had some management difficulties that were very clearly exposed in investigative reports and have been made a matter of record in the Congress. Those, clearly, have been the areas of prime concern, along with the unpredicted escalation indexes which were staggering during the period of double-digit inflation when these ships were authorized and constructed.

Senator **PROXMIRE**. I appreciate that very much, Admiral, and I do not mean that you do not have every right or reason to criticize, and should, if we are responsible, tell us because certainly none of us wants to delay and increase the cost, and reduce the quality of our procurement.

Admiral **WATKINS**. Perhaps the Secretary has a perspective, Senator Proxmire, on other aspects on that, that might be useful.

Secretary **LEHMAN**. Yes. Senator, I would just like to put in perspective those problems. While it is a very interesting discussion, nevertheless I think that the partnership between Congress and the Department of the Navy over the last 2 years, in solving the problems that were a long time building in the Trident program should stand as a case study on how Congress and the executive branch can successfully work together, apply management discipline and achieve performance.

As you know, with the forebearance of this subcommittee, their help, their advice and their participation, we were able to achieve a settlement, in August 1981, that effectively ended the problems at Electric Boat and between the Navy and Electric Boat.

Since that time, Electric Boat has delivered the three submarines in question—the *Ohio,* the *Michigan,* and the *Florida*—each a month ahead of that renegotiated schedule. Every submarine, including the SSN's, has been on time or ahead of schedule and on or under budget.

The fact that we have no claims and have achieved that kind of contract performance since then is a testament to the fact that the system does work, and this subcommittee, more than almost any other, participated in reaching that settlement.

Senator PROXMIRE. Thank you.

Thank you very much, Mr. Chairman. Mr. Chairman, I have some other questions for the record.

Senator STEVENS. Very good, they will be submitted at the conclusion of the hearing.

Senator Johnston.

Senator JOHNSTON. Thank you, Mr. Chairman.

ASW CAPABILITIES

Secretary Lehman, I do not know whether you can answer this question without going into secret testimony, but I wonder if you would comment on Soviet ASW capabilities. I ask the question in the context of budget hearings that are coming up, a budget markup which is coming up.

If I read the temper of the Congress correctly, there is going to be some reduction in the overall expenditure for defense which is going to call in question the inter-service expenditures, that is, how much is expended in each place.

It seems to me that Soviet ASW capabilities, in my view, are going to be very key to deciding how strong our second-strike capability is from the submarine. Can you comment on that without going into secret testimony?

Secretary LEHMAN. Yes, Senator. Without going into secret testimony, let me summarize that those of us who do have sustained access to all of the classified information and intelligence have no doubt that our submarines will remain largely invulnerable through this century.

In fact, the oceans are getting more opague rather than more transparent. It is an increasing advantage for the hiders rather than the finders. The evolution of technology today, for a variety of technical reasons, is not moving toward more vulnerability for our SSBN force but toward less vulnerability. Unfortunately, that is also true for the SSBN force of the Soviets as well.

So, you can, with confidence, look at the sea-based leg of the triad as one that is secure and will remain secure for a very long time.

I would like to ask Admiral Watkins to talk further.

Admiral **Watkins**. I do not have much more to offer to that, Senator, except that we have devoted extensive resources over the last 15 years to the entire issue that you are raising now. We feel extremely confident from what the Secretary just related to you, from independent studies—some run totally outside the Navy's purview—that have come to the same conclusion.

It is one of key blue-chips of superiority the United States has today over the numerically superior Soviet Union. We must always keep that lead in antisubmarine warfare and the performance of our SSN in that role.

We are probably close to 5 to 8 years ahead and we must maintain that lead over the Soviet Union because that is germane to the survivability of the SSBN issue downstream.

Senator **Johnston**. And, of course, our ASW capability against the Soviets at the present time is much better. We are light-years ahead of them in ASW capability, are we not? Are they light-years behind us in submarine capability?

Admiral **Watkins**. We use to be an infinite number of years ahead, Senator. Ten years ago, we were 10 years ahead. Now, we are 5 to 8 and running hard to stay ahead.

Senator **Johnston**. Thank you. That is very assuring.

JVX PROGRAM

Secretary Lehman, the JVX program, as you know, is a program I have been very interested in. It seems to me that it has tremendous possibilities that are beyond the helicopter, combining as it does speed, range, lift capability, all of these things; the ability to hide, silence, all of these things.

And yet, I understand that Secretary DeLauer, or at least Secretary Ambrose of the Army and others are showing less interest in that. Would you or General Barrow care to comment on the JVX program?

Secretary **Lehman**. Yes, Senator. I think the JVX is the most exciting aircraft program in any service's budget. I think the way we are able to reach a four-service MOU for a joint development program is, in itself, a major accomplishment.

I would hope, and I am confident that, in fact, the other services, other than the Navy and the Marine Corps, will not bail out of the program; because we have a very promising low-risk technology that can open up a whole new range of flexibility and roles for VSTOL in the fleet and in-the-fleet Marine Force.

The first requirement for the Navy Department is for the medium-lift replacement for the CH-46 and the CH-53. But the possibilities for JVX technology are very much wider than that, with almost limitless applications of new flexibility—the ability to put new kinds of airborne warfare capabilities on smaller ships, smaller carriers, destroyers, support ships, and so forth.

We intended, from the beginning of the program, to keep competition in it and to insure that we have at least two sources able to produce that airplane so that we maintain competition through the life of the program. That is the acquisition strategy that we have in hand.

Senator **Johnston**. Fine. My time is up. Thank you very much.

General **Barrow**. I would only add that the requirement is becoming increasingly a matter of urgency. We simply have to find a replacement for the CH-46E and the CH-53A/D models, that are filling our medium assault lift requirement, because they are aging. Whether it is JVX or something else, the requirement is urgent.

We think the JVX offers the best prospect and has a lot of appeal in terms of technology that will advance our capabilities enormously.

Senator **Johnston**. Let me just follow up. Do you know why Secretary DeLauer feels that the program is in such terrible shape and whether the escalated cost estimates are valid.

Secretary **Lehman**. I have no idea but I will certainly talk with him about it.

Senator **Johnston**. Thank you. Thank you, Mr. Chairman.

Senator **Stevens**. Senator Andrews.

Senator **Andrews**. Thank you, Mr. Chairman.

I have a series of questions I will put in the record because we have a vote on the floor.

SHIP RETIREMENTS

Mr. Secretary, I understand you have not been asked this yet this morning, how do you explain to the taxpayers back home that you are retiring ships that you refitted in the last 2 years to make room for buying new toys? And actually you are going to have fewer ships in the Navy because of that. I am referring to the Time magazine article.

Secretary **Lehman**. Yes, Senator. The Time magazine article is factually wrong in many, many areas.

Senator **Andrews**. What have you done, have you written a letter to Time magazine and asked it be published because their article is erroneous?

Secretary **Lehman**. No. I went up and spent all day with their editorial board yesterday, Senator, and, I hope, set them right on the facts.

Senator **Andrews**. That you have not retired any ships, you have not retired that half dozen ships that were refitted in the last 2 to 3 years?

Secretary **Lehman**. In fact, the number, depending on what you call an overhaul is 7 of 19 of those retired ships were overhauled within the last 2 years. These ships were nearing 30 years of age and were scheduled to retire in any case within the next 1, 2, and 3 years.

Senator **Andrews**. How much did you spend on the overhauls on those ships?

Secretary **Lehman**. I would be happy to provide that for the record.

We have gotten most of the use out of all of those overhauls.

[The information follows:]

SHIP OVERHAULS

Ship	Overhaul completion date	Final overhaul cost
U.S.S. Barry (DD 933)	March 1981	$17,300,000
U.S.S. Morton (DD 948)	March 1981	27,950,000
U.S.S. Blandy (DD 943)	April 1981	14,300,000
U.S.S. Forest Sherman (DD 931)	August 1981	18,880,000
U.S.S. Manley (DD 940)	September 1981	18,780,000
U.S.S. Mullinnix (DD 944)	January 1982	19,000,000
U.S.S. John Paul Jones (DDG 32)	January 1982	30,680,000
Total		146,890,000

Secretary **LEHMAN**. In any case, we do not mothball ships without having them able to be useful as soon as we have to mobilize them. In many cases, we will overhaul a ship to put it into mothballs. So, that is kind of a red-herring issue.

Senator **ANDREWS**. But what you are telling the committee is then that those overhauls were not major rebuilding of those ships, designed to give them an extra 8 to 10 years of life but were, rather, overhauls to allow them to go the next couple of years and be fit to go into mothballs.

Secretary **LEHMAN**. That is correct, Senator, yes.

Senator **ANDREWS**. And you will furnish the committee the figures on those overhauls, dollar figures on all of the ships mentioned so we will have that specific information.

Secretary **LEHMAN**. That is correct, Senator.

AIRCRAFT ENGINE PROCUREMENT

Senator **ANDREWS**. Now, some time ago this committee—in last year's bill—put a warranty in for the derivative fighter engine procurement. Is the Navy doing any procurement and have they had any experience yet with the 3,000 tactical cycle warranty, and are the contractors willing to live up to that warranty?

Secretary **LEHMAN**. That derivative fighter engine program is really an Air Force competition and we are not participating in it, Senator.

Senator **ANDREWS**. Nonetheless, it is my feeling that the engines that the Navy buys for their particular planes might well be covered by that kind of a warranty. Have you looked into that possibility?

Secretary **LEHMAN**. We have. We have a mixed experience with warranties. With the TF-30 engine which would be the logical candidate since we have had such awful problems with it over the many years it has been in the force, we have, so far in our negotiations, not been given a particularly attractive warranty offer.

Warranties are not given for free and they are a mixed blessing, depending on how they are insured. In effect, a warranty is the granting of a monopoly to repair for which we are not always prepared to grant.

Senator **ANDREWS**. I am chairman of the Transportation Subcommittee, and Pan Am and Northwest and other airlines, tell us that they would not buy new type engines to hang on the wings of their 747's, particularly in the nuke-type engines, unless they got a warranty. They get that kind of warranty because that indicates that the company will stand behind the engine that they say is newer and better.

Their feeling is that the reason you cannot get warranties in the military is because you keep adding "goo-gaas" to them as they go through the production cycle, just as you do in a host of other not only Navy procurement but Army and Air Force procurement items.

You change them so damned often with your change orders that there is no way a company could provide a warranty, costing the taxpayers a lot more money and having a lot of, shall we say, less than fit weapons systems out there or certainly not weapons systems that agree with the ones that went the year before or 2 years before.

Secretary **LEHMAN**. Senator, we have warranties and get warranties on all our engines according to contract spec. If it does not meet the spec in the testing, then the contractor has to pay to make it meet the spec.

What is at issue and what the contractor has offered here and what has gotten the publicity is a warranty mean time between failure and fleet use. This means that you have to take that engine, if it fails out in the Indian Ocean, and ship it back under that warranty, back to the factory. You pay a price for that and you also lose flexibility.

Military engines are subject to corrosion and G-forces, and the kinds of environmental requirements that force the use of practices and materials that the airlines need not pay for and need not require.

Senator **ANDREWS**. Well, if you could provide for the record—and we have to go make a vote, Mr. Secretary—the type of warranty you get, your experience with this whole warranty concept, and any further explanation that you might have on the seeming feeling—on the civilian side—we can get warranties on everything from a TV set to an automobile but you never can seek a warranty because the brass in the Pentagon keeps changing the specs so often that the contractor cannot provide a warranty because they do not have that dependability.

[The information follows:]

LIMITED WARRANTY ON JET ENGINE PROCUREMENT

Traditionally, the Navy has had a very limited warranty coverage on jet engine procurements. The two primary reasons for this are:

(1) The military application of engines (especially Navy carrier applications) is extremely demanding and subject to change as new threats and deployment requirements emerge. The uncertainty and high design risk involved has made manufacturers reluctant to offer warranty coverage and is also responsible for many of the changes (fixes) required in military engines.

(2) For most naval aircraft there has been only one engine developed. This sole source arrangement has been justified by the extreme high cost of development, but has resulted in little incentive for the manufacturer to offer warranty protection. Until recently, the only warranty coverage included in Navy engine procurements has been a "Defects" clause, which allows the Navy a specified time period (about 24 months) to notify the manufacturer that some defect in material or workmanship existed at the time of acceptance. This clause is intended to cover those defects which do not surface in the limited acceptance test of the engine.

Advances in technology and experience gained through actual operation of military jet engine applications over the last 30 years are not allowing manufacturers to design for military applications with more confidence. Concurrent advances in test methods are also allowing those designs to be evaluated more thoroughly. In addition, in recognition of the benefits of competition, the military has taken steps to create competitive procurement environments, where possible (e.g., F101/F100 competition). These factors have paved the way for the Navy to obtain its first expanded warranty coverage. At Navy request, Pratt and Whitney Aircraft Company proposed a low cycle fatigue (LCF) life warranty on newly developed TF30 rotor disks. The warranty protects against the costs involved with LCF cracking or disk failure due to LCF cracking for 3000 hours or 10 years, whichever occurs first. The Navy is now pursuing warrnty coverage for the F404 and T700 engines. Any F-14 alternate engine acquisitions will include warranty coverage as one of the source selection criteria.

The Navy's primary interest is in warranties to protect against high risk failures which are difficult to verify in test and would cause significant cost burden if found deficient in service. This is in contrast to many commercial warranties which warrant maintenance cost or other maintenance factors. The Navy would pursue such service warranties only on engines utilized in transport-type missions with simplified maintenance programs. The ECX engine is one case in point. The T700, F404 and F-14 alternate engine (if pursued) will employ warranties on hot section life, LCF life, performance deterioration, engine stall, etc.

The Navy will continue to pursue cost effective warranty coverage for engine procurements. It must be remembered, however, that warranty coverage does not come free. The cost will depend upon the extent of coverage (terms and conditions), the risk, the competition involved and agreed to limitations on contractor obligation.

Senator ANDREWS. That falls in line pretty closely also with what the Time magazine article was pointing up, and what your colleague in the Defense Department testified to those of us on the Budget Committee just last week. If you could provide that for the record I would appreciate it.

Mr. Chairman, I have a number of questions that I will submit for the record.

Senator STEVENS. All right. I have just a few here, Mr. Secretary, General, and Admiral.

CVN COST SAVINGS

We note that you have a request for $8.2 million for inflation on the contract for the two carriers. What is the projected cost savings now by continuing with the two-ship procurement? Has it been eroded by the $2.8 million?

Secretary LEHMAN. No. As you know, the full-funding requirement forces us to take the inflation indices that are recalculated every year by OMB, and apply them forward, in this case for the two carriers up to 1990 and 1991. Every year will require a recalculation of the outyear inflation. It is an estimate and we have no control over the calculation of that figure.

So, this has nothing to do with the contract or the cost estimates. In fact, my own personal estimate is that we now see considerably more than the $750 million savings that we have attested to and the GAO has audited. We believe we will be considerably over that but we will stick, officially, to the $750 million savings on the contract.

BATTLESHIP REACTIVATIONS

Senator STEVENS. Last year you asked for $94 million to start the reactivation of the *Missouri* and we denied it. This year, you have asked for $5.7 million for the same purpose. Did we save you $36.3 million or have you found a new way to reactivate the battleship?

Secretary **Lehman**. Since the year that has passed, Senator, since we submitted that earlier proposal, we have had a great deal of progress in cost control. We have had more experience on *New Jersey* and, as you know, delivered *New Jersey* 5 weeks ahead of schedule and under cost. So, we think that we now can do all of the long leading for *Missouri* for that lower price.

LEASING

Senator **Stevens**. I am intrigued by a request that we see—we have not received the request but it is built in here—that the Navy wants to lease commercial aircraft and hire civilian pilots to fly those aircraft to train navigators.

Now, that is sort of unique. We will never get our hands on that, I understand, unless we find some way to tag it into this. What is the purpose for that and are you going to lease the Hawk trainers from the British? Is this a new way to get aircraft without talking to us?

Secretary **Lehman**. No, Senator. We have discussed all of the lease programs in the past and, of course, the one that has received the most publicity is the lease of services for the TAKX, the converted charter option for the TAKX.

We have been leasing equipment, principally ships, for some 60 years in the Navy. It has suddenly come to high visibility because of the high visibility of TAKX.

We have also leased aircraft in the past. We are currently leasing C–9's.

Senator **Stevens**. Did you ever lease them for training before?

Secretary **Lehman**. Yes; we have.

Senator **Stevens**. In peacetime?

Secretary **Lehman**. In peacetime, yes. We have leased time on Lear jets for target intercept and target tow. We have been doing that for a while simply because it is cheaper. The only reason we have gone, in a limited way, to leases is because it is cheaper. We can get the civilian block time on the aircraft, for purposes that civilian-type aircraft do, just as well as military aircraft.

Senator **Stevens**. Why not do the same thing on cargo, then? Why not use more civilian cargo?

Secretary **Lehman**. We do. We have about 82 commercial-type ships under charter or acquisition, manned by civilian crews, built to civilian specs. We do it wherever we can. We think it saves the taxpayer a lot of money, including TAKX.

Senator **Stevens**. This is civilian pilots training navigators; that is an interesting thing. What is that plane that the Coast Guard wants, the Navy is going to get, and they are going to put people in to train? The Coast Guard could fly it and train the Navy operators at the same time and we would have a peaceful use of the equipment, at peacetime use the equipment.

I think that is an interesting proposition we would like to explore.

PERSONNEL

My last question is, you are going to increase your active-duty personnel by 34,000 from fiscal year 1982 to 1985. You have a request here for $11.9 million for the Navy in 1984, in the Marines another 2,700.

In a period of time like this, do we have to have increased manpower?

Secretary LEHMAN. Mr. Chairman, that is a steady growth, taking advantage of the higher retention; not increasing the intake but increasing the retention of the good people, we need to grow the Navy to the 500-ship level which is the minimum needed to meet our commitments. We think we are doing it in a fairly sensible and achievable way.

SUBMITTED QUESTIONS

Senator STEVENS. Very well. Gentlemen, I am sorry, we have a stack of votes here and then we have a meeting at noon. We will submit the rest of our questions. We appreciate your courtesy very much.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

DDG-51

QUESTION: The fiscal year 1984 request included $99.5 million for advance procurement on the DDG 51 lead ship destroyer. Why are these funds requested at a time when the basic design has not been settled?

ANSWER: The basic design of DDG 51 has been settled. Preliminary design is essentially complete (only verification of documentation remains) and contract design is just getting underway. Advance procurement is required to fund further design effort and to acquire long lead items for the AEGIS system and UYK-43 computers. Both the AEGIS Weapon System and UYK-43 computers have been approved by the Secretary of the Navy in the baseline design.

QUESTION: Preliminary estimates are $1.4 billion for the lead DDG 51 destroyer and over $1 billion for each of the planned follow ships. Do you consider this to be reasonable and affordable for a 63 ship program? (The last group of destroyers - DD 963 Class - would cost roughly $550-600 million in FY-1983 dollars to continue).

ANSWER: The DDG 51 program falls within the annual norm. The Navy recently targeted an average DDG 51 follow ship (hulls 6-10) cost at $700 million (FY-1983 dollars). This target is achievable with the current design and approaches the cost of a DD 963 in the same time period. The $700 million cost is reasonable when compared to a DD 963 ($600 million), particularly in view of improvements in overall capability and the ability to counter the threat in the 1990's. Further, this program is both reasonable and affordable in the context of replacing the DDG 2 and DDG 37 Classes of destroyers which are nearing the end of their 30 year service life.

COST AFFORDABILITY

QUESTION: In the shipbuilding account alone, the request for prior year inflation is increasing from $209 million to over $375 million. With lowering inflation rates, why is this increased catch-up funding needed?

ANSWER: Shortly before the submission of the FY 1983 budget, the Department of Defense issued new inflation indices. The very short turnaround period provided to assess the impact of these new higher indices allowed only a brief analysis on a total appropriation level of the additional escalation required. When later calculations based on analysis of the impact on each individual ship type were completed, it became clear that the amount of escalation provided in the FY 1983 budget would not be sufficient to meet total escalation requirements. The new DOD indices incorporated in the FY 1984 Budget reflect the lower actual inflation experienced in FY 1982 and also assume lower outyear inflation rates than the indices used for the FY 1983 Budget. The FY 1984 Escalation request results, despite the new lower rates, largely because the entire escalation requirement was not provided in FY 1983. Adjustments have also been made to reflect the impact of actual contractor expenditures as opposed to previous estimates of the time expenditures would occur. The FY 1984 Escalation request reflects the funding required to fully fund the latest approved OSD/OMB indices for all FY 1983 and prior year programs.

TAO 187

QUESTION: The request includes $524.6 million for the construction of three 180,000 barrel capacity oilers. Wouldn't it be cheaper to extend the existing fleet of 120,000 barrel Navy oilers in lieu of new construction?

ANSWER: Increasing the capacity of the 120,000 barrel Navy oilers, also referred to as jumboizing the AO 177 Class, involves questions of feasibility and force level implications, as well as those concerning cost.

Concerning feasibility, the Naval Sea Systems Command has completed its initial review of an unsolicited proposal from Avondale Shipyard Inc., the AO 177 Class shipbuilder, to perform a 60,000 barrel jumboization. This review identified the following problem areas:

o The proposal fails to meet U.S. Navy stability criteria and would result in a jumboized oiler with a lesser level of survivability than the present AO 177 class oiler.

o Insufficient information was provided regarding the design's bending moment, loading conditions or midship location detail.

o Weights and stability calculations need to be refined.

A more detailed analysis now underway is scheduled to be completed by about 1 May. A determination on the feasibility of the proposal in its present form cannot be made until this detailed analysis is complete. Similarly, an accurate cost estimate cannot be made until the feasibility of the conversion as proposed by Avondale has been determined.

The issue of force level requirements needs to be addressed because increasing the capacity of all CIMARRON Class oilers by 60,000 barrels each would only decrease the ultimate TAO 187 requirement by two ships. The TAO 187 oiler program is required to achieve oiler force level requirements first and then replace World War II and Korean War vintage oilers that will average 42 and 35 years of age, respectively, as each is retired. Any delay in the near term programmed building stream would therefore impact negatively on the oiler force inventory and retirement plans.

If the jumboizing proves feasible and cost effective the duration of the conversion would determine the exact timing of the AO 177 conversion sequence.

BATTLESHIPS

QUESTION: GAO Auditors have determined that over $24 million remains unobligated on the NEW JERSEY reactivation and some $7 million of excess material was ordered. Was work deferred from this reactivation causing the unobligated balances?

ANSWER: No. No Phase I reactivation and modernization work was deferred or deleted. All ships systems are operational as required by the reactivation work package. Additional work items emerging as a result of trials, inspections, and shakedown cruise will be completed by the end of PSA within the SCN budgeted $326 million.

QUESTION: What are the Navy's plans for the excess material?

ANSWER: In the case of Navy standard material, it will either be turned back into the supply system for credit or utilized and paid for by other hulls. Where the material is identified as Battleship peculiar, it will either be utilized on the IOWA BB 61 reactivation or turned over to USS NEW JERSEY for future utilization.

QUESTION: GAO also discovered that 20 percent of the direct labor cost for the NEW JERSEY reactivation was overtime. Do you expect similar overtime results on the IOWA?

ANSWER: No. The IOWA is scheduled to deliver in June 1984 which is a 21 month availability as compared to a 15 month availability for NEW JERSEY. Although there is more work required on IOWA the fact that all the planning and design work was completed prior to the start of the industrial effort will enable the reactivation to be accomplished with a minimum of overtime.

TRANSPORTATION CONSOLIDATION

QUESTION: Last year DOD proposed the consolidation of the Military Sealift Command and the Military Traffic Management Command as a means to streamline transportation management efforts of DOD. Navy opposed the consolidation and the authorization act eventually prohibited the merger. Since Secretary Weinberger still views the merger as a cost effective alternative, would you comment on the prospects of this consolidation in the future?

ANSWER: The Military Services are currently working with OSD to achieve a major improvement in traffic management for lift requirements by land, sea and air without need of a merger.

CVN 72 and CVN 73 FUNDING

QUESTION: The fiscal year 1984 shipbuilding escalation request includes $82.8 million for inflation on the contract for two carriers just signed three months ago. Does this mean that the projected savings of $754 million from the two ship procurement has just eroded by $82.8 million?

ANSWER: No. The baseline for the Navy's estimate of savings (cost avoidance) for the multiship plan was a comparison of that plan against the traditional way that these two nuclear aircraft carriers would have been bought. A summary of that comparison is shown below.

CVN 72 and CVN 73 Funding
Traditional versus Multiship
($ millions)

Fiscal Year	1982	1983	1984	1985	1986	Total
Traditional Plan	$475	583	3,056	945	2,965	$8,024
Multiship Plan	475	6,795	-			7,270
Savings	-	($6,212)	3,056	945	2,965	$ 754

From a cost estimating standpoint both the traditional and the multiship plan were estimated using the same economic indices for projected outyear inflation. The FY 1984 request for $82.8

million reflects the impact on the shipbuilding contract of the changes in inflationary indices since the 2 ship estimate was prepared for the FY83 Congressional Budget. Had the traditional plan been executed the change in indices would have impacted that plan in proportionately the same order of magnitude. In total such changes would effect the projected escalation required for either plan in relative proportion with relative savings remaining essentially the same.

As required by Congress, the multiship program is fully funded over its nine year life. Changes in currently projected inflation rates will occur during this period. As this happens the full funding requirement will necessitate the Navy to assess the impact of the latest projection and reflect the impact in the next budget request. This would be the same in either the traditional plan if it had been executed or the multiship plan as currently under contract.

LSD-41 MULTI-YEAR PROCUREMENT

QUESTION: We note with some interest that Navy is requesting multi-year authority for the LSD-41 class landing ships. The lead ship is requested in fiscal year 1984, but $182.1 million is also requested for advance procurement on four additional ships to be built in 1985 and 1986. What economic advantages could support this departure from traditional shipbuilding budgeting practices?

ANSWER: The Navy is choosing to enter into a competitive, fixed price incentive multi-year contract in FY 1984 for five LSD-41 class ships because it provides an estimated savings of $246.4 million to the Government as compared to more traditional annual procurement.

QUESTION: The last major multi-year shipbuilding project was the LHA amphibious ship program in the early 1970's which ended with claims from the shipbuilder. In view of the bad history of multi-year with shipbuilding, why should we commit future Congresses to this kind of obligation?

ANSWER: There is a considerable difference between the "total package procurement" of LHA's and the multi-year procurement of LSD-41 class ships. The primary differences are as follows:

LHA	LSD
- New design	- Follow ship based on FY 81 leadship design
- Complex new design complex combat system	- Simple, stable design with minimal combat system
- Total package procurement for original contract	- Multi-year funded with no cancellation ceiling which means Government has no cancellation liability if FY85 or FY86 ships are not funded.
- Limited number of shipyards available to construct	- Multiple proven shipbuilders with surplus industrial capacity who can compete for the multi-year contract.

QUESTION: Doesn't multi-year contracting for ships take away program flexibility in the future?

ANSWER: The current Five Year Defense Plan has nine LSD-41 class ships programmed between fiscal year 1984 and fiscal year 1988. The multi-year procurement of three years (FY 1984 through FY 1986) supports a requirement of five of the nine programmed ships. This procurement strategy provides the benefits of multiyear procurement and the flexibility for revised program requirements.

F/A-18

QUESTION: Your proposed FY 1983 F-18 engine multi-year exceeds $1 billion and will require enabling language in the DOD Appropriations Bill. Have you proposed inclusion of such language in the 1983 supplemental? If not, under what authority do you propose to enter this multi-year contract?

ANSWER: General Electric has submitted a multi-year proposal for the F/A-18 engine. This proposal will be thoroughly reviewed and analyzed to determine the accurate savings of multi-year procurement as compared to buying the engines on an annual basis. If the validated savings support a multi-year procurement, the appropriate Chairmen of the Senate and House Armed Services and Appropriations Committees will be sent letters notifying them of the estimated savings through the award of a contract on a multi-year basis and requesting enabling legislation.

LEASING/CHARTERING PROGRAMS

QUESTION: There is a growing trend in DoD to utilize chartering or leasing as a means of acquiring ships and aircraft. It's hard to determine the extent of this practice since it is not budgeted until after the government's commitment is made. Under present practices, the Appropriations Committee has no advance review over long-term leasing proposals for ships and aircraft. Do you find this to be an acceptable practice?

ANSWER: The Navy conducted extensive advance Congressional liaison regarding both the TAKX and T-5 programs. Until the DOD Authorization Act 1983 (Section 303), there was no formal Congressional oversight procedure, however, the Navy customarily provided informal briefings. In accordance with Section 303, the Navy provided comprehensive formal reports and a number of briefings. We believe this is an acceptable practice.

QUESTION: Recent Congressional testimony indicates that DoD's cost analyses of charter programs do not consider the loss of tax revenues from contractor depreciation of ships and aircraft. It has been suggested that lease options may be as expensive to the government as direct purchase when tax expenditures are considered. What policy has the Navy installed to control this practice and insure that leasing is a cost effective alternative?

ANSWER: The several cost analyses prepared for the Navy's TAKX build and charter program fully considered the tax gains and losses to the Government and concluded that chartering in that case was less expensive than a purchase. The problem with any such analysis is that there are a number of different methodologies and assumptions that can reasonably be employed. At the present there is no agreement within or between the legislative and executive branches as to the best methodology and assumptions. The Navy believes that the methodology and assumptions which it utilized last August on the TAKX program are the most accurate and efforts are underway to gain a consensus.

UNFO/TSU PROGRAM

QUESTION: Congress becomes aware of leasing proposals only on a spot basis--for example, we've learned that the Navy intends to lease commercial aircraft and pilot services to train Navy navigators. Why is something like this necessary? Wouldn't it be cheaper to increase your flying hour program?

ANSWER: The Undergraduate Naval Flight Officer Training System Upgrade (UNFO/TSU) is for multi-year procurement of training support for undergraduate naval flight officers who will enter the fleet either as radar intercept officers or tactical navigators. The procurement is for services only and will not involve lease of any hardware. The training services will consist of course material prepared by the contractor, actual experience on contractor-furnished military radar in an aircraft provided by the contractor, instructor pilot services, and a ground radar training device. The contractor will be responsible for the maintenance and logistical support of all equipment, including the aircraft. The program is designed to correct a major deficiency in the NFO training program--an aging, fuel inefficient T-39D aircraft with an outdated and unsupportable APQ-94 radar. The 27 T-39's currently assigned to Training Squadron TEN and Training Squadron EIGHT SIX will be replaced by the UNFO/TSU program. An increase in the flying program would not correct this problem.

This multi-year purchase of service approach qualifies under 10 US Code 2306(s). It was undertaken after analysis showed that it was more cost effective and efficient than purchase or lease of replacement radars and aircraft with continued Navy maintenance of the systems.

VTXTS

QUESTION: Secretary Lehman, is the Navy still thinking about leasing Hawk trainers from the British? What inspired that idea, and what's the situation now?

ANSWER: The Navy is currently evaluating a British proposal to lease 12 Royal Air Force Hawks. If we do lease these RAF aircraft, they would be used in undergraduate naval flight officer training, not in pilot training. These aircraft would be the British TMK1 model, not VTXTS T-45 aircraft. Leasing these aircraft would allow transfer of trainers now used in naval flight officer training into pilot training.

T-5 TANKERS

QUESTION: Despite reservations from this Committee, the Navy proceeded with the T-5 tanker lease program. In view of past performance on this matter, can you offer any reason why the option for the additional three T-5 tankers should be approved?

ANSWER: The T-5 tanker lease program has unfortunately been linked to the TAKX program when in fact it is a program to replace aging small tankers in the MSC fleet. Replacement is required to meet the standards of the Ports and Terminals Safety Act 1978 and implementing regulations. The military distribution system makes smaller tankers necessary, a requirement dictated by point of delivery and port constraints such as draft and pier length. Their mission is to provide point-to-point transportation for refined product cargoes for DOD requirements including Pre-positioned War Reserve Stocks. The T-5's will enable replacement of those tankers approaching obsolescence under the 1978 Act.

OTHER PROCUREMENT

QUESTION: The Navy's Other Procurement account has a sharp, $1.4 billion increase over 1983 -- up more than 40 percent. Why is such dramatic growth necessary?

ANSWER: The $1,348.5 million increase from FY 1983 to FY 1984 includes an increase of $442.4 million for expendable ordnance, an increase of $664.2 million for equipments in support of the Fleet Modernization Program (FMP), and an increase of $241.9 million for equipment in support of the Navy's shore establishment. The increase for expendable ordnance represents a continuing commitment by the Navy to improve our combat sustainability. The increase for FMP related equipment procurements reflects the Navy's plan to update and improve the military capabilities of weapons, sensor, and other ship systems during regular overhauls in the FY 1986-FY 1987 time frame. The increase for equipment procurements for the shore establishment is necessary to provide adequate support to our forces afloat.

AIRCRAFT PROCUREMENT

QUESTION: Mr. Secretary, the Navy continues to budget for a wide variety of tactical aircraft -- some critics say too many varieties -- with production rates that do not seem adequate to expand the force as required. This is not only costly, but it doesn't meet the demands of a 600-ship Navy with 15 carrier battle groups. What is being done about this problem?

ANSWER: The Navy has long recognized the issue of the affordability of a relatively wide variety of aircraft procured at lower than their most economic production rates. Alternative solutions are explored in every budget cycle. However, these aircraft are required to execute all missions assigned the Navy and Marine Corps. Where possible, within fiscal constraints, aircraft are procured at higher, more economic rates. We also strive to reduce the number of production lines by building aircraft with multi-mission capability and by producing variants of existing aircraft to meet requirements where possible. The current Navy budget balances the issue of affordability with fleet requirements and will permit the expansion to 14 active carrier air wings in the FYDP years.

EFFICIENT PRODUCTION

QUESTION: Isn't the Navy going to have to face up to some tough decisions and start reducing the various types of fighter and attack aircraft so that production can become more efficient and responsive?

ANSWER: All the various types of aircraft in the Navy budget are necessary to meet specific mission requirements. The relatively wide variety of these aircraft is directly related to the diverse tasking assigned to the Navy and Marine Corps. The only process by which these mission requirements can be filled with fewer types of aircraft is to produce more multimission aircraft, which is an ongoing Navy procurement objective.

MINIMUM PRODUCTION RATES

QUESTION: What minimum production rates are necessary to fill out the tactical air expansion required for the expanding force?

ANSWER: The procurement of tactical aircraft at the rates requested in the Navy FYDP are essentially the minimum required to expand the force to 14 air wings in the FYDP years, although we will still fall short of the number of aircraft required to maintain the average age of the inventory.

F/A-18

QUESTION: Please bring us up to date on the troubled F/A-18 program, Mr. Secretary. The House Appropriations Committee has charged the Navy is hiding the extent of cost growth from Congress. And the performance of the aircraft, particularly in the attack mode, is considered insufficient. Are you planning any changes in the budgeted program before us?

ANSWER: Since its inception, the F/A-18 multimission strike fighter has developed more smoothly than most defense systems acquisitions. Unfortunately, much attention has been focused on a few aspects of weapons systems development. All development programs have areas that require changes and corrections in the development and testing process. The purpose of that process is to identify those areas. The F/A-18 has done extremely well when compared to other programs at the same stages of development. Also, like any other item produced during the past few years, it has not been immune to inflation.

Through Selected Acquisition Reports, congressional data sheets and during congressional hearings, the Congress has been kept informed regarding the cost increases.

In response to the request of the House Appropriations Committee, the Secretary of Defense has tasked the Office of the Defense Inspector General (DOD IG) to review the F/A-18 program and to specifically look into the charges of the House Appropriations Committee.

A draft of a proposed audit report was prepared by the DOD IG and the Navy staff comments for the DOD IG to consider in preparing the final report, to be submitted to the Secretary of Defense.

Regarding the performance of the aircraft, particularly in the attack mode, reviews by the Defense Systems Acquisition Review

Council have verified F/A-18 performance is adequate to meet the operational requirements as a multimission strike fighter. Secretary Weinberger approved production of the F/A-18 to fill light attack inventory requirements, as well as previously approved fighter inventory requirements. The F/A-18 has demonstrated an operational combat attack radius of over 450 nautical miles, more than adequate attack range. The first operational Marine F/A-18 squadron (VMFA-314) is routinely flying air-to-ground training missions of over 500 nautical miles with representative combat loads.

MARINE CORPS PROCUREMENT BUDGET

QUESTION: Marine Corps procurement, unlike much of the balance of the Navy budget, is showing a reduction from 1983 -- down about 11 percent in real terms. What is behind this reduction?

ANSWER: The Marine Corps FY 1983 procurement budget had been significantly increased by OSD during the final stages of budget development in order to enhance the Marine Corps readiness and sustainability posture. The assessment of Marine Corps requirements for FY 1984 led to a budget submission slightly below the FY 1983 level but consistent with a balanced budget submission.

LAND-BASED TACTICAL AIR

QUESTION: Whatever happened to those plans to use Air Force B-52s for long range anti-ship missions? We hear now, Mr. Secretary, that you want to modify P-3s for that kind of mission. Are we into the usual inter-Service rivalry problems?

ANSWER: Absolutely not. It is a case of several approaches to a warfighting problem. The Air Force does not have long range, anti-ship operations as a primary mission. However, the B-52 has long had a collateral mission to support maritime operations. What is currently underway, with significant Navy assistance, is a proof of concept test program to demonstrate that a modified B-52 can carry and effectively release a HARPOON missile with external targeting assistance. Their availability for such assignment would, of course, be contingent on other tasking by the Unified Theater Commanders in their primary mission areas.

I am also interested in the possibility of modifying some of our older P-3 aircraft to optimize them for a primary anti-surface ship warfare mission. In response to the "inter-Service rivalry" question, Navy maritime patrol aircraft have, for many years, had an anti-surface ship mission and capability in addition to their anti-submarine warfare role: before HARPOON missiles they had BULLPUP.

Navy maritime patrol aircraft are funded, and mission-dedicated, to long range maritime surveillance, targeting and attack of both surface and sub-surface threats. These P-3 aircraft are optimized for survival and effectiveness against maritime threats worldwide. They are based all over the world in peacetime, and are rapidly deployable and redeployable for crisis or war so as to mass anti-submarine and anti-surface capability wherever needed and to sustain such presence and capability for as long as necessary. To optimize some of these assets for their anti-surface mission is reasonable and certainly worthy of a close look, particularly since we cannot expect to have sufficient afloat naval forces to fulfill all of our global responsibilities and commitments simultaneously.

QUESTION: Why isn't it a good idea to utilize B-52s for the maritime mission since they are already modified to carry cruise missiles? Aren't they ideally suited for that role once they're replaced by B-1s?

ANSWER: B-52s are being modified to carry some types of cruise missiles, but are not as yet being modified to carry anti-ship missiles except for two or three test aircraft which have been temporarily reconfigured to carry Navy HARPOON missiles and communications and targeting equipment. So additional modifications will be required to provide B-52s a capability to carry, target, and release anti-ship cruise missiles. If B-52s are so modified, and available, they could provide useful augmentation to naval forces which cannot cover all global commitments simultaneously.

I would not say B-52s are "ideally suited" for the maritime mission, as they were not designed or built for a maritime role, and are certainly not now optimized for the difficult and increasingly sophisticated maritime threat we face in the 1990's and beyond.

How B-52s might stack up against level of need and alternative systems remains to be seen, if and when B-52s become truly available for dedicated maritime use. Age, reconfiguration and operating costs, manpower requirements, overseas basing, and multi-mission applicability are but a few of the major considerations that would have to be weighed.

I do not wish to evaluate Air Force weapons systems, but would prefer you allow Secretary Orr or General Gabriel that opportunity.

However, I do want to comment on the relative priority of needs for assistance to US and allied naval forces. These priorities have been agreed to by the Navy and Air Force Departments in our Memorandum of Agreement last fall, [deleted].

In terms of threat and our current and projected naval force capabilities, the clear number one area for near term Air Force assistance is anti-air warfare, followed by mine warfare and then by anti-surface ship warfare. Thus I believe that B-52s, if available from their demanding primary missions, could assist us most by aerial mining in support of anti-submarine warfare.

The US Navy has, I believe [deleted] [deleted] a relative advantage in anti-surface ship warfare for now and for the forseeable future. However, that being said, B-52s in any maritime supporting role need self-protection such as provided by HARPOON and if available as added "shooters" could be most useful.

AV-8B HARRIER

QUESTION: Please bring us up to date on the Navy's plans for acquiring two seat trainer versions of the AV-8B Harrier. The understanding last year, as I recall, was that the Navy would use 1983 procurement funding for the trainers. What's happening?

ANSWER: Because it will provide an all VSTOL light attack force, the AV-8B remains the highest priority Marine Aviation program. The TAV-8B is the trainer of choice to support the AV-8B program.

NAVAIRSYSCOM has completed an Acquisition Plan in support of the USMC stated requirement. This plan is currently undergoing Department of the Navy review. The proposed FY-84 budget contains $47 million for TAV-8B development.

QUESTION: Has the safety record on the Harrier improved substantially? Tell us how this vertical take-off aircraft is doing so far with the Marines.

ANSWER: The current safety record of the AV-8A/C is substantially better than the rate established in 1977. Since that time the Marine Corps improved the training syllabus, refined supervisory techniques and provided more flight time to new V/STOL aviators to ensure currency and safe progression to combat readiness. However, the AV-8A and AV-8C are characterized as high workload aircraft and are relatively unforgiving of error. Consequently, the accident rate for these early model V/STOL aircraft remains relatively high.

The AV-8B, an entirely new V/STOL aircraft, is substantially easier to fly. Aerodynamically it is more stable, responsive and capable. Modern avionics systems stabilize the aircraft and compensate for divergence due to wind or sideslip. The reduced workload resulting from these improvements combined with the improved reliability of its engine and subsystems will make the AV-8B a much safer aircraft than its predecessors.

TRIDENT II MISSILES

QUESTION: The Navy TRIDENT II R&D budget request of $1.5 billion will start in full scale engineering development of the D-5 SLBM this year. The request is some $82 million higher than last year's project, due to the switch from the MK 12A Re-entry vehicle to the ABRV. Why was this switch made?

ANSWER: The baseline reentry vehicle for the TRIDENT II missile is a new ballistic reentry body designated the MK5 (not the ABRV). The MK 5 RB was selected to replace the MK 12A RV because it increases weapon system effectiveness. It should be noted that the $82 million dollars applies to the entire TRIDENT II program element. This includes the increase due to the change to the new BRB of $104 million; an increase of $4.6 million for development of shipboard subsystems to meet the earlier introduction of the TRIDENT II into new construction submarines and a net increase of $4.6 million in the GEOSAT program required to protect a FY 84 satellite launch. These increases have been offset partially by a reduction in the assumed inflation rates from those used in the FY 83 submission.

QUESTION: Does this indicate any uncertainty on the part of the Navy about the accuracy of the D-5? Do you require a higher yield to compensate for degradations in accuracy.

ANSWER: Although the accuracy objective for TRIDENT II is very demanding we presently have confidence in meeting the objective. The higher yield is not required to compensate for degradations in accuracy, but rather to increase the weapon effectiveness against hardened targets which are projected to be in the target base when TRIDENT II becomes operational.

QUESTION: Will the change to the ABRV in any way affect the 1989 IOC of the D-5?

ANSWER: The D-5 will employ a new BRB, not the ABRV. The development of the new BRB will not affect the D-5 IOC.

QUESTION: Secretary Lehman, how does the current US negotiating position at the START talks affect how many TRIDENT II SSBNs and D-5 missiles we might deploy? If we are limited to 2500 SLBM RVs, won't we either have to deploy fewer TRIDENTs or decrease the number of RVs on each D-5?

ANSWER: The US START position would lead to substantial reductions in Soviet and US strategic forces. The increased capability of the TRIDENT II missile and the quieter TRIDENT submarine will permit the US to accept a lower number of TRIDENT II equipped SSBNs than our current force of 31 POSEIDON and 3 TRIDENT SSBNs. The US has proposed a limit of 850 deployed ballistic missiles and 5000 missile warheads; no more than half of the missile warheads may be on land-based missiles. Thus we are not limited to 2500 SLBM warheads. The US proposal would permit 20 TRIDENT submarines with D-5 missiles and 100 MX missiles (i.e., the President's modernization program is not impacted by our START proposal).

COMMON MISSILE

QUESTION: With strong program direction from USDR&E, couldn't the Navy and Air Force efficiently manage a common missile program? Why not?

ANSWER: The issue is not efficient management of the program. Objections to the common missile hinge upon the suitability of any one missile for both ICBM and SLBM roles.

A common missile was defined in the 1978 Air Force/Navy Commonality Study. No significant cost savings were identified, and no particular benefits were seen to accrue. Therefore, no further common missile definition has occurred.

TOMAHAWK

QUESTION: Why hasn't the conventionally armed, land attack TOMAHAWK gone into production as the 16 1982/83 TLAM(C) missiles are proposed for testing?

ANSWER: Due to development problems, the TOMAHAWK program has been restructured. Primary emphasis is being placed on the procurement of TLAM/N and TASM missiles. The 16 TLAM/C missiles bought in FY 1982/1983 will support initial fleet capability aboard the battleship, as well as supporting test and evaluation of BLOCK II design missiles which will incorporate a terminal dive maneuver and a submunition dispenser. BLOCK II missile procurement will commence in FY 1985.

QUESTION: The Commander-In-Chief, Pacific Fleet (CINCPAC) notified the Chief of Naval Operations by message dated October, 1982, [deleted].

ANSWER: The Commander in Chief Pacific (CINCPAC) specifically addressed the need to [deleted] enhance the missile's ability to attack Pacific Command targets.

QUESTION: Is the Joint Cruise Missile Project Office (JCMPO) working to correct these problems?

ANSWER: The Navy has been aware of the need for alternative methods of delivering the BULLPUP warhead and initiated planning for a variable dive angle in May 1980. Two (2) Contractor Test and Evaluation (CTE) missile flights were conducted in FY81 to demonstrate terminal dive angle feasibility. The Navy's current restructured Conventional Land Attack Program continues variable dive angle attack concept development [deleted].

QUESTION: Has funding been requested to correct the deficiencies mentioned by CINCPAC?

ANSWER: Funding has been requested as a part of the restructured TOMAHAWK program. The source of the FY 1983 portion of these funds is current Navy funds and is contained in the reprogramming shortly to be delivered to Congress. The FY 1984 portion of the funds is contained in the FY 1984 Sea Launched Cruise Missile Budget.

QUESTION: Would you provide a copy of CINCPAC's message for the record?

ANSWER: A copy of CINCPAC's message is hereby provided.

NAVAL MESSAGE NAVY DEPARTMENT PENTAGON TELECOMMUNICATIONS CENTER NAVAL MESSAGE

RTTSZYUW RUHQSGG6500 2920401
ROUTINE
R 210401Z OCT 82

FM CINCPAC HONOLULU HI

TO CNO WASHINGTON DC

INFO CINCPACFLT PEARL HARBOR HI CINCLANT NORFOLK VA
ADMIN CINCPAC HONOLULU HI
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SECRET//N03600//
TANGO 015 FOR ADMIN CINCPAC
SUBJ: FUNDING FOR TOMAHAWK IMPROVEMENTS (U)
A. CNO 252306Z AUG 82
B. CINCPAC 151645Z MAY 82

[Deleted.]

DECLAS: OADR
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TOMAHAWK

QUESTION: If the problems mentioned by CINCPAC are related to the terminal maneuver, what level of confidence will your current test program give you that TOMAHAWK can successfully attack representative land targets at various required dive angles?

ANSWER: We have high level of confidence of our ability to introduce the terminal dive maneuver capability which is currently under development as part of the restructed TOMAHAWK program. These development efforts include an 8 flight test program and analysis program which will insure that an effective capability is developed and deployed.

QUESTION: Is that level of confidence acceptable for other weapon programs?

ANSWER: Weapon systems are not introduced into test and evaluation unless the preceding research and engineering studies give us a high level of confidence in the ability of the system to meet the established performance criteria and counter the threat for which it was designed. We are confident in our ability to develop the terminal manuever capability of the TLAM/C.

QUESTION: Is there a written requirement for the conventionally armed (unitary warhead), land attack TOMAHAWK?

ANSWER: The Executive Program Summary for the Sea Launched Cruise Missile Program, December 18, 1979, originated by the Assistant Secretary of the Navy (Research, Engineering and Systems) provides an assessment of the need for the TOMAHAWK conventional (TLAM/C) missile.

QUESTION: What targets are planned for this version of the TOMAHAWK?

ANSWER: The unitary warhead has two fuzing capabilities, a contact fuze and an air burst fuze. [Deleted] [deleted]. The air burst option weapon has an enhanced area coverage capability [deleted].

This target list is not all inclusive and actual targets would depend on the mission and the threat.

QUESTION: For the TLAM/C what are the accuracy requirements for various targets in the horizontal flight to the target mode and in the terminal maneuver, variable dive angle attack mode?

ANSWER: For the horizontal flight version of the TLAM/C the terminal accuracy requirement is a CEP [deleted] the same accuracy requirement applies to the terminal dive version. In flight tests the horizontal flight missile has consistently demonstrated CEP's [deleted].

QUESTION: Are these accuracies achievable with the current inertial guidance system?

ANSWER: The missile has exceeded the accuracy requirements in the horizontal flight mode. The accuracy of the terminal dive and submunition dispenser versions currently under development, will be demonstrated in the flight test/analysis program contained in the restructed TOMAHAWK program.

QUESTION: When will the Navy be able to demonstrate the ability of the missile to satisfy its accuracy requirements in the terminal maneuver, variable dive angle attack mode?

ANSWER: Under the restructured TOMAHAWK program development test and operational test of the variable dive angle attack are scheduled to be conducted in the spring/summer of 1984.

QUESTION: Would you calculate the cost and the number of missiles required to have reasonable confidence of destroying planned targets in the various attack modes using the planned and demonstrated accuracies of the TLAM/C?

ANSWER: The Navy has calculated an interim inventory objective of conventional land attack missiles in order to counter the perceived threat. The costs of these missiles ($5,127.5 Million) are contained within the FY 1984 Congressional Data Sheets. The inventory objective is constantly under study and will be periodically revised as threat levels change and as the new BLOCK IIA (terminal dive maneuver) and B (submunition dispenser) missiles are introduced into the fleet.

QUESTION: What can be done to improve the accuracy of the conventionally armed TOMAHAWK?

ANSWER: Various techniques are under assessment by JCMPO and DARPA as a research and technology assessment effort. Should future accuracy requirements dictate new techniques, the most technically achieveable and affordable method will be developed as a BLOCK upgrade to the existing system.

QUESTION: How much will it cost?

ANSWER: The cost of developing such a system cannot be currently identified.

QUESTION: When could it be operational?

ANSWER: An operational date cannot be established until a system is identified.

QUESTION: What would be the impact on the nuclear armed TOMAHAWK if the conventional armed, land attack TOMAHAWK were cancelled?

ANSWER: If the conventional armed TOMAHAWK remaining in the budget were cancelled, the effect on the procurement cost of remaining missiles (anti-ship and nuclear) would be as follows:

Total Dollar Increase	Average Flyaway Unit Cost Increase
+ $876.9 Million	+ $0.952 Million

The GLCM program would also increase by +$10.8 Million. However, total sea launched cruise missile program cost would decrease by $4,250.6 Million.

MILITARY PERSONNEL

QUESTION: Mr. Secretary, Admiral Watkins, General Barrow, there has been considerable discussion over the wisdom of freezing military pay in fiscal year 1984. The military services have not been enthusiastic supporters of this policy decision. It now appears certain that any pay raise costs authorized by Congress would have to be taken out of your budget. If you had the option, which way would you go? Absorb a pay raise or use that funding for programs now budgeted?

ANSWER: * The fiscal year 1984 budget is a carefully considered document which required difficult decisions in regard to end strength, force structure, and procurement. The final budget submitted represents an optimum balance between readiness, sustainability, and modernization within funding available to the Department of the Navy. A pay raise could not be absorbed without adverse impact on the balance attained in the budget, and on operational readiness, sustainability, and modernization.

As you are aware, the pay freeze is one of the important increments of the President's Budget and his economic recovery program. While a pay raise is desirable, we support retaining the funding for programs now budgeted, consistent with the President's Budget submission.

* (This answer reflects the united view of Secretary Lehman, Admiral Watkins and General Barrow.)

PAY RAISE

QUESTION: Do you think it's fair for the military to have a four percent pay rise while the civilian Federal employees remain frozen and actually take a reduction because of requirements for new deductions?

ANSWER: The Administration has proposed a pay freeze for all Federal employees in order to help reduce the Federal deficit, and Navy men and women are part of this national effort to restore economic health. Military compensation policy is based on attracting and retaining the required numbers of personnel to meet national security objectives, not on comparisons of military and civil service pay. Thus, while fairness is certainly one of the basic principles upon which to measure the adequacy of pay, other factors such as the differing conditions of service between the two groups should also be considered.

QUESTION: If a pay raise were approved, should it be across-the-board 4 percent? Or should it be targeted to some of the middle ranks where retention inducements are more clearly needed?

ANSWER: The Administration is proposing a pay freeze this year and the Navy is supportive of Administration efforts to restore economic health to the nation. However, had the Administration proposed a pay raise for FY-1984 in the 4 percent area, Navy would have supported targeting, aimed primarily at our career enlisted and mid-grade officers. Any targeting must be carefully scrutinized in order to avoid pay inversion problems which can be extremely detrimental to morale.

COSTS OF FY 1982 TO FY 1988 END STRENGTH INCREASES

QUESTION: The Navy plans to have increased its active duty personnel by 34,000 from FY 1982 to FY 1985. What are the near and long-term costs of these additional personnel? What further manpower changes are anticipated for the next five years and at what cost?

ANSWER: The FY 1983 and Five Year Defense Program Navy strength plan and MPN dollars available to support this plan are shown below:

	FY 83	FY 84	FY 85
End Strength			
Officer	68,288	70,200	73,200
Enlisted	487,487	497,475	508,875
Midshipmen	4,525	4,525	4,525
Total	560,300	572,200	586,600
MPN ($000's)	10,661,208	11,293,600	11,749,704

	FY 86	FY 87	FY 88
End Strength			
Officer	74,100	74,900	74,900
Enlisted	517,975	522,975	527,375
Midshipmen	4,525	4,525	4,525
Total	596,600	602,400	606,800
MPN ($000's)	12,100,255	12,362,293	12,298,218

FY 1984 END STRENGTH INCREASE

QUESTION: The Navy plans to increase its personnel 11,900 to 572,200 for FY 1984. Why is this increase required? What savings would accrue if no such increase took place?

ANSWER: This 11,900 personnel increase supports Navy's upgrading of capabilities essential to meet its worldwide tasking. The increase will provide manning of the new ships and squadrons in Navy's inventory, provide the foundation for future growth, and allow us to increase the manning level and personnel readiness of our existing force. A net increase of twenty ships and six aviation squadrons is scheduled in FY 1984. Precommissioning and full crews are needed for these ships and for ships returning from extended overhauls, as well as for new aircraft squadrons. Increased personnel are also needed to improve manning of currently existing ship and aircraft squadron forces.

Increases in support personnel ashore reflect requirements in the areas of training, contingency medical readiness, improved care for active duty personnel, support at Naval Reserve bases and air stations, and support of intelligence and communications facilities.

Operating forces, including ships, aviation squadrons, and strategic units account for 50% of the increase. Medical, auxiliary, and fleet support activities, and training account for the remainder.

The savings associated with allowing no growth in FY 1984 strength over the FY 1983 end strength would be $49.3 million.

MILITARY PERSONNEL

QUESTION: The Marines likewise plan a 2,700 man increase to attain a projected end strength of 197,300. What is the cost of this increase and what force structure changes, if any, will take place to accommodate the additional personnel?

ANSWER: The cost of the 2,700 end strength is approximately $15.5 million. This increase will accomplish two things. First, it will support the manning of additional combat, combat support and combat service support organizations. Specifically, activation, reactivation, or reorganization of the following units will occur; two I-Hawk Light Anti-aircraft Missile batteries, two TOW platoons, a Light Armored Vehicle battalion (minus), artillery battalions equipped with the new M-198 howitzer and the reorganization of two 18 aircraft CH-46 helicopter squadrons into three 12 aircraft squadrons. Second, the 2,700 increase will improve the manning, level of Fleet Marine Force units from 92 to 93 percent.

MEDICAL INCREASE

QUESTION: Of the projected 11,900 - man Navy increase, 2800 are planned for improved Medical Readiness. What are the cost and purpose of these additional personnel?

ANSWER: Of the projected 11,900 Navy end strength increase, 2,800 are planned for improved medical readiness. The purpose of these additional medical personnel is to correct long standing shortfalls in the capability to provide casualty care in support of Navy and Marine Corps. This increase will provide additional active duty and dependent care, reduce our dependence on CHAMPUS, and increase the overall quality of Navy health care, both in wartime and peacetime.

The following list shows where the 2,800 medical end strength growth occurs and its associated cost.

	FY83 to FY 84	Total
	OFF/ENL	
Station Hospital and Medical Clinics	346/1176	+1522
Care in regional Defense Facilities	198/865	+1061
Dental Care Activities	/33	+ 33
Land Forces (with Marines)	21/35	+ 56
Other Health Stations Base Operations Support	121/30	+ 151

The cost of the planned increase of 2823 in medical personnel in FY 1984 is $16.7 million.

PERSONNEL FOR FORCE STRUCTURE

QUESTION: The Navy plans a net increase of six aircraft squadrons for this fiscal year, five for the USS VINSON and one additional support helicopter squadron. What are the personnel implications and costs for this force structure change?

ANSWER: The net increase of six aircraft squadrons in FY 1984 is due to the commissioning of the USS VINSON (CVN 70) for which the 13th Air Wing is being established. The squadron personnel are now in the training pipeline, and should be available in the summer of fiscal year 1983. The Helicopter Combat Support Squadron (HC 5) is coming on line to satisfy the vertical replenishment requirement in the Western Pacific Fleet. The Carrier on Board Delivery Squadron (VRC 50) had previously filled this requirement. As this capability was inadequate, the (HC 5) squadron is introduced in FY 1984 to assume the vertical replenishment responsibility.

The force structure shown below reflects programmed manning for these squadrons in FY 1984.

UNIT	OFFICER/ENLISTED
VA 55	30/267
VF 131	21/231
VF 132	20/232
VAW 127	19/138
VAQ 139	27/171
HC 5	17/185
HC 5 Det	0/21

The FY 1984 cost of the 1379 additional personnel for these six aircraft squadrons is $5.5 million.

TRIDENT MANPOWER

QUESTION: What are the cost and purpose of the 500 additional personnel associated with the TRIDENT submarine budgeted in FY 1984?

ANSWER: The purpose of the additional personnel budgeted in FY 1984 is to man the SSBN 729, which will be commissioned in FY 1984, and the additional manpower that will be placed on precommissioning crews for SSBNs 730, 731, 732, and 733. The approximate cost for this officer and enlisted manpower is $2 million.

AIR-LAUNCHED TOMAHAWK II (MRASM)

QUESTION: Air-Launched TOMAHAWK II (MARASM). Mr. Secretary, for each of the past two years the Navy has been trying to withdraw from the joint Navy Air Force MRASM Program. The Navy version is called the Air-Launched TOMAHAWK. The Navy even offered to give up its version, the Air-Launced TOMAHAWK in the appropriations conference appeal package last year.

Just how strong is the Navy commitment to this joint progam now? Aren't you undermining this joint program?

ANSWER: For the past two years the Navy has advised the Secretary of Defense and Congress that the Navy Air-Launched TOMAHAWK (MRASM) program should not be pursued.

In each year, however, the Congress ultimately directed the Navy to continue actively in the joint development program. The Navy is complying explicitly with this Congressional direction. We are funding the joint MRASM program in FY 1983 at the level appropriated by the Congress; and in FY 1984 at the level directed by the Secretary of Defense.

We believe we are fulfilling our responsibilities meticulously--both in advising the Congress that Navy MRASM should not be pursued, and in complying with Congressional direction to continue it. In no way are we undermining the joint program.

MK 48 ADCAP TORPEDO

QUESTION: Mr. Secretary, last year the Navy restructured the MK 48 ADCAP Torpedo program to reduce cost and technical risk and eliminate concurrency between development and production. Is the Navy asking for advance procurement money prior to the completion of the operation test and evaluation?

ANSWER: Procurement funding requested for ADCAP prior to completion of OPEVAL will be used to provide tooling, non-recurring start-up costs and long lead material associated with establishing and checking out the initial phase production build-up to support an FY-86 IOC. ADCAP remains a program of the highest national priority to meet an existing and expanding threat.

The restructured ADCAP program schedule includes a limited amount of concurrency between development and production, appropriately balancing the urgency of the threat and need for a timely IOC against limited, well-controlled technical and cost risks. Releases of FY-84 and FY-85 procurement funds are each keyed to satisfactory completion of in-water tests followed by formal review and approval by the Chief of Navy Operations.

QUESTION: What is your program milestone for pilot production? Will you have enough time to review all test results prior to committing to pilot production?

ANSWER: The pilot production approval milestone is the release of FY-85 procurement funds by the Secretary of the Navy, following a program review in the March/April 1985 timeframe. The following conditions must be met for SECNAV approval to begin production:

- Satisfactory completion of contractor test and evaluation (CTE) of Engineering Development Model ADCAP torpedoes.
- A satisfactory report by Commander, Operational Test and Evaluation Force on all ADCAP testing through CTE. (Feb 85)
- CNO/SECNAV formal review of the program.

Some 441 Advanced Development Model (ADM) and 82 Engineering Development Model (EDM) in-water runs will have been evaluated at the pilot production milestone. Navy Technical and Operational Evaluation in-water runs using EDMs will remain to be completed during the following year prior to delivery of the first pilot production ADCAP units.

DDG-51

QUESTION: What naval gunfire systems will be on the DDG-51 in support of the Marine's amphibious assault mission?

ANSWER: One standard MK45 gun system with SEAFIRE fire control system and semi-active laser guided projectiles.

QUESTION: How firm is your commitment to keeping the 5-inch semi-active laser guided projectile and the SEAFIRE electro-optical fire control system on the DDG-51?

ANSWER: The system is included in the design of the DDG-51. Funding and management attention remain focused at the top levels of the Navy to ensure SEAFIRE meets the lead ship of the class.

QUESTION: What initiatives are you taking to keep the SQS-53C sonar on schedule with the lead DDG-51 ship? Can we expect a reprogramming?

ANSWER: SQS-53C development has received a great deal of management attention at all levels of the Navy:

- The Secretariat has actively participated in and been kept appraised of decisions to help assure that development and funding problems are solved in real time.
- A dedicated Project Office, PMS-411, has been created with total ASW system responsibilities to ensure proper mangement

attention to the critical elements in the entire ASW system development.

- The Comptroller has redressed funding shortfalls by reprogramming $21.7 million to SQS-53C.

These initiatives, among others, give us confidence that the development program is on schedule to meet the first DDG-51.

QUESTION: Why is it so essential to include RACER (Ranking Cycle Energy Recovery) system on the DDG-51? Couldn't we eliminate RACER from the DDG-51 design and save some costs?

ANSWER: RACER is not essential to the DDG-51 design, but it could be cost effective. When RACER is developed we will take another look at it.

AEGIS

QUESTION: An article in Spectrum magazine by the former director of the Naval Weapons Center at China Lake, California, challenges the widespread use of radar systems on Navy ships especially the CG-47 AEGIS class cruiser. According to the article, the AEGIS radar system has caused the cost of the cruiser to go from $400 million to about $1.4 billion each, and that the radar emissions from AEGIS will enable an enemy armed with antiradar defenses to detect and destroy the ship. Will you comment on these allegations?

ANSWER: The article to which you refer provided an interesting, albeit somewhat simplistic and biased, discussion of the value of antiradiation missiles (ARMs) in modern warfare. I am certain the members of this Committee are eminently aware of the Navy's continuing interest and investment in ARM technology, which is the basis for the development of our inventory of antiradiation weapons that includes STANDARD ARM and SHRIKE and soon will add the more capable HARM missiles.

Their military value notwithstanding, however, antiradiation missiles provide no more universal solutions to modern naval warfare problems than do any other of our available technologies. We have found through research, extensive testing, study, and battle experience that victory in war depends upon the intelligent application of a panoply of diverse capabilities, no one of which is sufficient unto itself.

With specific regard to the article in Spectrum by Mr. Thomas S. Amile (Spectrum: Vol 19, nr 4, Apr 82, pp 61-65), we should ensure that we quote his remarks accurately, both with regard to the cost of our AEGIS-equipped cruisers and regarding his allegations of their vulnerability to antiradiation missiles.

Cost. Mr. Amlie states that the AEGIS weapon system has "... raised the cost of each destroyer to $1.4 billion - compared with $400 million for the destroyer versions..." It is assumed that Mr. Amlie is attempting to compare the costs of our new CG-47 class cruisers with those of the DD-963 class destroyers, which share the same basic hull and machinery design. In both cases his figures are incorrect. No CG-47 class ship has cost that much; the three cruisers in the FY84 SCN budget, for example, are budgeted at approximately $1.1 billion each. Moreover, it is estimated that a DD-963 class destroyer, if constructed today, would cost approximately $600 million, and so the difference in cost between the two ships is closer to $500 million than to Mr. Amlie's estimate of $1 billion. Of that difference, the AEGIS radar accounts for only about 16%. The remainder purchases the cruiser's superior missile launching system, survivability features, command and control, communications, and anti-missile defensive systems.

Alleged Vulnerability. Mr. Amlie's simplistic descriptions of the employment of active sensors and antiradiation missiles in combat suggest that he may understand more about electrical engineering than he does about the complexities of modern warfare. (Spectrum is a professional journal published by the IEEE.) What Mr. Amlie fails to make clear in his article is the fact that the U.S. Navy (and the other Services, as well) employs the advantages of antiradiation missiles in those scenarios where they may be brought to bear. Similarly, based upon both our experience and research, we believe we have a sound understanding of the relative vulnerabilities to such weapons inherent in detection and tracking systems that employ active emissions to sense the enemy's presence.

That understanding is the basis for concluding that there is no single best solution for all enemy threats in all environments and at all times. There are times when a naval commander at sea may operate his entire force in total electromagnetic silence, much as the Japanese task force did enroute to their attack on Pearl Harbor in 1941. At other times, when actually under attack as the British were recently in the Falklands, a commander would be foolhardy to neglect any capability he has to increase his defensive firepower, since his general location is already known to the enemy.

When considering ships of the CG-47 class, firepower is the operative measure of effectiveness. There is no other ship in the world — none — with an equivalent ability to detect, track and destroy airborne targets. The AEGIS based combat suite on CG-47 is specifically designed to counter-attack large numbers of anti-shipping missiles, as well as aircraft, whether those missiles are active homing or are homing on emissions generated aboard some friendly platform. In addition, the type of radar used in the AEGIS system is more capable of electronic countermeasures against incoming missiles than the conventional radar systems that have been used in the fleet for years.

In summary, then, my assessment of Mr. Amlie's text would be similar to that of RADM Wayne Meyer whose comments were published in Spectrum concurrently with Mr. Amlie's article. Admiral Meyer stated that "While I cannot agree with the simplicity of Mr. Amlie's approach, or with most of his hypotheses and conclusions, I can agree that we should continue to develop and exploit the promise of ARM and electronics technology."

RADAR ARM VULNERABILITY

QUESTION: The author of the article also states that in the past there have been incidents in which a U.S. ship was accidentally damaged by one of our own anti-radar homing missiles and in which U.S. marines were killed in Vietnam by the same type of missile. After the marines were killed, they turned off their anti-radar mortar systems and never used them again. The ship incident involved the USS WORDEN which was damaged in the Gulf of Tonkin. Can you verify these incidents and state what lessons the Navy learned?

ANSWER: On 16 April 1972, the USS WORDEN was accidentally struck by one, possibly two, anti-radiation missiles fired by one (or possibly two) unidentified U.S. aircraft while operating in the Gulf of Tonkin. The USS WORDEN was operating approximately 85 miles southeast of Haiphong at the time of the attack. According to the investigation conducted as a result of the incident, all major electronic equipment was operating, including the AN/SPS-10, 43, and 48 Air Search Radars. The ship was linked via Link-11 to all other Navy Tactical Data System units in the Gulf of Tonkin; the link quality was excellent. Visibility at the time was excellent. The missile, or missiles, exploded about 30-40 feet to port of the centerline and 30-40 feet above the port wing of the bridge. According to examination by ordnance experts of recovered fragments, the missile(s) was fired by U.S. aircraft. The probable direction of attack was from the south. Additional information indicates that the anti-radiation missile operated on a frequency band approximately the same as the operational frequency of the AN/SPS-48 Air Search Radar, which would indicate a high probability that this radar provided the target for the anti-radiation missile seeker. The investigating officer could not determine from sources available to him either the identity of the missile or missiles. His conclusion was that the WORDEN was hit by a missile or missiles accidentally fired from unknown U.S. aircraft.

The incident reaffirmed that ARM missiles can be a serious threat to our ships. It does not mean that our radars cannot ever be used or that ARM missiles are a panacea for the destruction of surface ships. Defense against ARM weapons must be considered in the context of the overall AAW problem. The strengths and weaknesses associated with the wartime use of radars vulnerable to ARM weapons are well understood by our operational commanders. We will continue to consider the best ways to defeat ARM weapons as a part of our layered AAW defenses.

Methods that are used to defeat ARM weapons include: tactical deception, distribution of launch platform, EMCON, electronic decoys and point defense missiles and guns. No one method is the answer all the time. The ARM weapon presents us with a problem as do the other types of missile homing devices, but our layered defense in depth gives us a wide variety of methods to counter them.

SOVIET ANTI-RADAR DEFENSES

QUESTION: Isn't it correct that the Soviets probably have anti-radar defenses such as our HARM missile, and will be able to shoot down U.S. aircraft and destroy U.S. ships unless they have turned their radars off?

ANSWER: The Soviets do have anti-radiation homing missiles. [Deleted.]

TAO - FY 1984 REQUEST

QUESTION: The Navy is requesting fiscal year 1984 funds for three additional T-AO-187 class ships. These funds are being requested even though construction on these ships is not expected to begin until fiscal year 1985. Construction start dates on these ships based on firm delivery dates and a 31 month 1/ construction period, are shown below. According to the

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1/ The estimated construction period for ships similiar to the T-AO-187s.

Navy, the contractor has the option of determining the construction start dates so long as the firm delivery dates are met.

T-AO Hull No.	Fiscal Year Funding	Projected Construction Start Month/ Year	Projected Construction Start Fiscal Year	Ship Delivery Date
187	1982	MAR 84	1984	SEP 86
188	1983	MAY 84	1984	JAN 87
189	1984	NOV 84	1985	MAY 87
190	1984	MAR 85	1985	SEP 87
191	1984	JUL 85	1985	JAN 88

Given that follow ships will be common with the lead ship, what was the Navy's rationale for establishing a 31 March 1983, option exercise date for the second ship since this, in effect requiring fiscal year 1983 funding even though construction would not begin until fiscal year 1984?

ANSWER: The start-of-construction date in a shipbuilding contract is but a symbolic milestone point in the total production process, and it varies from shipbuilder to shipbuilder depending on each company's production technique. What is important about the start-of-construction date is the amount of planning and procurement necessary before this point is reached. Therefore, while it is correct that actual physical construction of the FY 1983 T-AO will not start until FY 1984, the shipbuilder has begun obligating FY 1983 funds to support both the construction start and the 1987 delivery of this ship. At this point, the shipbuilder has ordered the shafting, propulsion diesels and some other major engineering equipments exclusive of electrical generating equipments (shaft-driven alternators). He will obligate additional monies to develop the necessary production plans, to hire and train workers and to procure other material required to support the start-of-construction.

SHIP CONSTRUCTION FUNDS

QUESTION: Why is the Navy requesting ship construction funds in fiscal year 1984 for three ships that will not start construction until fiscal year 1985?

ANSWER: Before actual construction begins, a shipbuilder must perform a myriad of actions to support the construction start date. The same is true for the fiscal year 1984 ships. This group of actions includes additional engineering, material and equipment ordering, and other similar indirect labor costs. Some actions can be performed concurrently, while others must be taken sequentially to support the start-of-construction.

It must be stressed that the reasoning behind T-AO contract was that if only the delivery date of final ship in the initial procurement and a limiting interval between preceding deliveries was fixed, a shipbuilder would establish his most efficient and economical production schedule and reflect this in his bid. This has been the case in the T-AO construction program.

TAO-FY 1984 REQUEST

QUESTION: The estimated price for the fiscal year 1984 ship options(s) are as follows. The basic line represents the contract target price. According to Navy officials, the changes account is calculated at 5 percent of basic, and the amounts for escalation and project manager's growth are calculated using the same percentage of basic as in the Navy's fiscal year 1983 T-AO estimate. The amounts in the remaining accounts are based on the Navy's fiscal year 1983 P-8 submission.

Explain why the Navy is requesting $524.6 million for three ships when the total estimated price is about $476 million.

ANSWER: The $476 million total estimated price for three fiscal year 1984 ships outlined in the COMMENTS paragraph is in error. It contains two serious pricing errors, reflects fiscal year 1983 GFE/GFI/support level costs, rather than fiscal year 1984 pricing, and uses the improper figure for Basic Construction costs.

The Navy does not compute Escalation for budget quality estimates as "a percent of Basic Construction," rather, it computes Escalation on an individual hull basis, using award/start/delivery dates, the labor/overhaul/material cost breakdowns, the projected rate of when costs will be incurred (by month) and projected inflation rate over the life of the contract. Similarly, P.M. Growth is not computed as a percent of Basic Construction, but rather as a percent of government furnished equipment (GFE), since prices may change over the years the ships are in construction.

In its $524.6 million estimate, the Navy included $365.2 million for the pre-priced Basic Construction amounts of the three ships, including the "technology transfer" option for the American production of diesel engines. These figures were valid at the time the Navy's estimate was developed. Since then, the Navy has signed a contract modification with the shipbuilder (Avondale) against the fiscal year 1982 ship, to cover the one-time costs associated with the "technology transfer". However, the actual production costs for one ship set of engines must still be properly assessed against the fiscal year 1984 ships. This is not the case with the $476 million estimate. In addition to not including the production costs of one ship's set of engines, the $476 million figure further does not allow for the American production of a second or third ship set of diesel engines.

Part of the difference in estimates relates to the fact that fiscal year 1983 GFE prices were used in computing the $476 million estimate. This does not take into account inflation and market place changes occurring between 1983 and 1984.

One final difference between the Navy's $526 million figure is the amount computed for the Changes allowance. The Navy computed changes at 7.5 percent o Basic Construction, since these ships are the option

	3-FY 84 Ships	2-FY 84 Ships	1-FY 84 Ship
Basic	$347,268,016	$231,925,320	$116,224,020
Changes (5% of Basic)	17,363,400	11,596,270	5,811,200
Electronics	10,920,000	7,280,000	3,640,000
Hull, Mechanical, Electrical	12,840,000	8,560,000	4,280,000
Other costs	2,700,000	1,800,000	900,000
Ordnance	2,520,000	1,680,000	840,000
Escalation (23% of Basic	79,872,000	53,343,000	26,731,000
P.M. Growth (.7% of Basic)	2,431,000	1,623,000	813,600
End Cost	$475,914,416	$317,807,590	$159,239,820
Average Cost	$158,638,140	$158,903,800	$159,239,820

follow-ons to the first ship of this new design Fleet Oiler class, and any changes made to that ship must be repeated in all other ships optioned to that contract. The $476 million estimate assumes 5 percent, which would be the normal amount for follow ship of repeat buys, assuming a new contract which would include changes made on previous ships in the basic construction estimate. In addition, the $476 million improperly computes the Changes against Basic Construction costs which does not include the production costs of American built diesel engines.

TAO - FY 1984 REQUEST

QUESTION: The average cost per ship, based on the fiscal year 1984 3-ship option, is about $159 million. The Navy estimates an average cost of $230 million based on a total of 4 ships to be requested in fiscal year 1985. Please explain what accounts for the difference.

ANSWER: The Navy estimate of an average of $230 million per ship in fiscal year 1985 (total of 4 ships requested) and the question's estimate of $159 million based on the fiscal year 1984 3-ship option, differ in several areas. First, the Navy's estimates were developed prior to the favorable award competiton for the first flight of 5 ships, fiscal year 1982 through 1984. Reflecting this favorable price competition, the average estimated cost per ship would be reduced to $214 million. Next, the estimate of $159 million per ship for the fiscal year 1984 program is in error; an average of approximately $175 million per ship is correct. Finally, the difference between the average costs for the FY 1984 program and the FY 1985 program is based on inflation between the different award dates, the assumption that there will be less rigorous competition in FY 1985 than in FY 1982, and the inclusion of a second shipbuilder starting in FY 1985. The estimates assume startup costs associated with introducing a second source in FY 1985. The second source will broaden shipyard capacity and enhance competition in later years.

JUMBOIZING THE AO-177

QUESTION: Provide an overview of the contractor's unsolicited feasiblity study to include its conclusions, and the Navy's analysis of that study.

QUESTION: What has the Navy done to evaluate the feasibility and cost of jumboizing the AO-177 class of ships?

ANSWER: The shipbuilder proposed a 100 foot plug in the AO-177 class to provide additional liquid cargo capacity to equal that of the T-AO 187. While the shipbuilder's proposal may be technically feasible, there were inadequacies in the study, such as:

- o Shipbuilders added 100 foot section did not meet Navy damage stability criteria.

- o Study was incomplete as regards bending moment, weight estimates, vertical center of gravity (KG), loading conditions, and midship section design.
- o With proposed 100 foot section, the ship will not meet the 20 knot sustained speed required for Naval auxiliary ships.

Even with these inadequacies, the proposal warrants further technical review and the Navy has initiated action to do so. Estimated completion of this technical review is in June 1983.

QUESTION: In view of the fact the Navy now plans to keep its older oilers in service until 1990 instead of retiring them as the AO-177s and T-AO-187 come on line, what other concerns would preclude jumboizing the AO-177s as a means of reducing the T-AO-187's program size of 21?

ANSWER: The combined effects of jumboization, new T-AO construction, and oiler service life extensions on the oiler force level must be considered before the subject of jumboization can be addressed as a separate issue.

The Navy presently is deficient [deleted] [deleted] force level requirement. The requirement increases [deleted] in fiscal year 1990. The magnitude of this deficiency requires that older oilers be extended beyond their original programmed retirements. It is important to note that initial T-AO 187 construction will decrease the force level deficiency and then replace these aging oilers, which will average 42 and 35 years old as classes, respectively, when retired.

If jumboizing proves both technically feasible and cost effective, the duration of the conversion would determine the exact timing of the AO-177 conversion sequence.

MERCHANT SHIP NAVAL AUGMENTATION PROGRAM (MSNAP)

QUESTION: Explain why the study was limited to only the one version of converted tankers. When does the Navy plan to complete the study for converting tankers to "full capability oilers?"

ANSWER: It is believed that the study referred to in the question is titled "Feasibility of Providing U. S. Flag Merchant Oil Tankers with Augmentation Oiler Capability." A draft of this study, less the as yet incomplete costing data, is dated 1 December 1982.

The draft study does not address a "full capability oiler" and explores only the limited and expeditious installation of a series of modifications to existing merchant ships. Modifications of this nature fall within the charter of the Navy's MSNAP Program.

All MSNAP projects have concentrated on the simple and rapid modification of existing assets to augment Navy replenishment at sea ships. The MSNAP augmentation oiler is intended for a limited mission in time of contingency. The added equipment does not interfere with the ship's ability to carry on its commercial trade and can be quickly removed when no longer needed for military purposes.

A study to convert a merchant tanker to a "full capability oiler" has never formally been tasked, although originally proposed as part of the study, the "full capability oiler" was dropped since that was beyond the purview of the MSNAP Program.

MERCHANT SHIP NAVAL AUGMENTATION PROGRAM (MSNAP)

QUESTION: What limitations exist that would prohibit the austere version from being used in a peacetime role? Please explain the difference between an "austere" and "full capability" converted tanker.

ANSWER: No limitation would exist for the use of an MSNAP augmentation oiler in peacetime provided the ship met all regulatory body requirements. However, many of the commercial tankers that exist today do not meet current pollution regulations and are costly to operate. These tankers are being forced out of the commercial trade for those reasons.

It is this source of tankers that Navy is looking to for candidate ships for the Ready Reserve Force (RRF). Sixteen (16) tankers are programmed over the FYDP for inclusion in the RRF program. These ships would be employed only in time of contingency. Their use in peacetime would be restricted due to high cost of operation and pollution regulatory requirements.

The difference between an austere modification of the MSNAP type and a "full capability" converted tanker is difficult to describe since the quoted term has not been defined. If the intent is to provide a completely capable substitute for a Navy oiler, it must be anticipated that the required conversion would be complex, lengthy and costly. A large amount of underway replenishment equipment must be installed, additional crew facilities provided, and utility services expanded. None of these changes increase the speed of the selected ship. Any propulsion plant modification designed to provide speed compatibility with the Navy battle groups would be expected to require extensive conversion at high cost.

QUESTION: Please explain why the "austere" version would only have a wartime and not a peacetime role?

ANSWER: The "austere" or the MSNAP ship has a wartime role to deliver POL and a limited range of other products to Navy underway replenishment ships and selected large combatants. The MSNAP ship acts to augment existing Navy Mobile Logistic Force (MLSF) ships. The MSNAP ship can, relatively speaking, be made quickly available and as quickly be released to return to commercial service. This augmentation capability is presently not required in peacetime.

QUESTION: What are the Navy's plans for using converted tankers in a fleet oiler role? If no plans exist, explain why the Navy does not consider this to be a viable option to new construction of fleet oilers.

ANSWER: The Navy is already providing astern fueling capability and the capability to receive a refueling rig to selected U. S. Flag tankers via national defense features and the purchase and stockpiling of equipment. Additionally, the MSNAP program has active R&D projects to develop a modular fueling-at-sea (alongside) station, as well as dry cargo delivery capability, for use in time of contingency.

As I indicated earlier, a commercial tanker converted to a fleet oiler role would be complex, lengthy and costly. Navy has no current plans for such a conversion.

READINESS VS PROCUREMENT

QUESTION: There has been considerable discussion in the press and in Congress lately over the thrust of the military modernization budget and whether procurement of new weapons is being pursued at the expense of readiness and current capability. The Navy, for instance, is accused of mothballing ships and cutting corners in order to procure and deploy new vessels. Secretary Lehman, you doubtless have a response to that allegation.

ANSWER: The Navy has carefully structured its program over the Five Year Defense Plan to achieve the proper balance between (1) modernization and force structure initiatives and (2) maintenance of current readiness and sustainability. We have not and will not sacrifice the readiness of our forces to expand the Navy. An analysis of our planned spending on operating and support items in comparison to hardware procurement confirms that we have allocated adequate resources for readiness. The Navy program contains more money for operating and support costs per unit than has historically been provided. Again in the FY 85 budget submission, we will concentrate heavily on those items which improve our readiness and sustainability while continuing our shipbuilding and modernization efforts.

The decision to decommission some of our older ships was made only after a substantial reduction in outlay funding in FY 83 was agreed between the Administration and Congressional leadership. It was not contemplated or recommended by the Navy Department. These ships are 23 to 28 years old and are approaching the end of their useful service lives. They are considerably less capable than the ships which are replacing them.

QUESTION: But doesn't the heavy emphasis on modernization threaten readiness levels in the out years? Won't outlays from large investments proposed now tend to dominate future budgets, particularly if there are budget constraints?

ANSWER: No. The Navy has provided a balanced plan to enlarge and modernize our forces while maintaining requisite readiness and improving sustainability by improving the depth of our logistic support, both in spare parts and ordnance items. In real terms, the Navy has planned more resources per unit for operations and maintenance of the fleet than has been true over the last decade. The readiness of the Navy's forces in being cannot and will not be sacrificed to build a larger force.

Our planned investment strategy will require a constancy of purpose if we are to attain the desired force structure at reasonable cost. If program stability is undermined by year-to-year fluctuations in resources provided, the costs of rebuilding our Navy will increase significantly.

DD/DDG RETIREMENTS IN FY 1983

QUESTION: Last year the Administration recommended and Congress concurred in the retirement of 17 destroyers. Critics claim that this action is further evidence of the tendency to sacrifice near-term readiness in order to fuel the procurement program. What is your view?

ANSWER: There is no relationship between procurement actions and the decision to retire 17 destroyers/guided missile destroyers in FY 1983. These ships were already approaching the end of their expected service life. Their combat systems were marginal against today's threat and they had begun to require expenditure of maintenance time and funds out of proportion to their potential warfighting contribution.

QUESTION: Has the retirement of these vessels deferred the attainment of the 600 ship objective.

ANSWER: No. All of these ships were previously scheduled to retire prior to the end of Fiscal Year 1989 which is the time at which Navy will achieve its goal of 600 ships.

FLYING HOURS

QUESTION: Another criticism is that the Navy's flying and steaming hours are declining, again eroding readiness. However, fiscal year 1984 budget data seem to demonstrate flying and steaming equivalent to the fiscal year 1983 program with an actual increase in the number of underway steaming hours. Isn't that the case?

ANSWER: The budget request for fiscal year 1984 is based on an essentially level flying hour program overall when compared to the fiscal year 1983 budget plan. In order to hold total flying level and still incorporate specific programmatic changes, such as introduction of new F/A-18 squadrons, it was necessary to decrease the TACAIR/ASW portion of the flying hour program which is measured as primary mission readiness (PMR). This reduction in PMR was programmed on the basis that a one-year lower rate would not appreciably impact readiness.

With respect to ship underway days, deployed forces continue level with fiscal year 1983 but funds are requested to sustain OPTEMPO for the nondeployed forces at an average 29 days per quarter. This two day per quarter increase, after one-year of reduced OPTEMPO in fiscal year 1983, is particularly important to recover training and the associated readiness necessary to effectively prepare ships for future scheduled deployments and possible contingencies that may arise.

QUESTIONS SUBMITTED BY SENATOR GARN

NAVY'S STRATEGIC C^3 NETWORK

QUESTION: Secretary Lehman, in a nuclear environment, what are the weak points in the Navy's strategic C^3 network? How does this affect the responsiveness of our sea-based strategic nuclear forces? How does the Navy's FY 84 budget address these vulnerabilities?

ANSWER: A significant limitation in the Navy's strategic C^3 network at any time is the necessity for our submarines to be at relatively shallow depths to communicate. For the ballistic missile submarine which must maintain constant reception, this increases its potential detectability and severely limits its maneuverability and flexibility of operations. [Deleted] [deleted] fixed communications systems (VLF, LF and

HF) are vulnerable to destruction [deleted] [deleted]. The primary surviving Navy Strategic Command, Control and Communication (C^3) system is the Airborne Relay System (TACAMO). The current (EC-130) TACAMO system has a significant number of decifiencies which degrade its capability to perform and reduce the probability of its providing an assured communication link during nuclear war. Finally, without special protective measures, all systems are subject to disruptions by Electromagnetic Pulse energy and jamming.

The sea-based strategic nuclear forces are fully responsive to current national guidance. The correction of the weak points described above will allow greater flexibility of these sea-based forces and will enable them to better respond to new or changed guidance.

Initiatives in the Navy's FY84 budget support the ELF communications system; upgrade the capabilities of the current TACAMO fleet to include EMP hardening; continue the development and procurement of a more capable follow-on ECX airframe which overcomes the deficiencies of the EC-130; improve connectivity to TACAMO and other strategic forces through EHF MILSTAR and enhance communication effectiveness. Each of these will improve the survivability and endurance of the Navy strategic C^3 capability including an extended period nuclear conflict.

TRIDENT II SUBSTITUTION FOR MX

QUESTION: Secretary Lehman, the Congressional Budget Office recently recommended the cancellation of MX in favor of relying upon the TRIDENT II (D-5) missile for providing the United States with hard target kill missile capability. Would you please comment on this recommendation?

ANSWER: Because the accuracy goals of MX and D-5 are the same at the operational ranges required, and the warheads planned for the two missiles are of similar yield, the hard target kill capability of the two systems is comparable.

Other factors besides hard target kill capability must be considered in D-5/MX comparisons, however. First, the IOC of MX is 1986, while the IOC of D-5 is not until 1989. Further, deployment of all the U.S. hard-target capability in the sea-based force eases the defense problem for the Soviets by allowing their planners to concentrate on only the bomber and SLBM threats. Diversity of systems complicates enemy problems in providing an adequate defense and in structuring credible threats to U.S. systems. Additionally, diversity in our strategic forces provides a hedge against uncertainties in system performance and unanticipated changes in the threat.

QUESTION: Secretary Lehman, the Navy had under review last year potential steps that could be taken to accelerate the Initial Operational Capability schedule for D-5 deployment. What conclusions did the Navy reach concerning the acceleration of the IOC? What risks are associated with an accelerated schedule? What is the IOC date for D-5 and when will the Navy complete the deployment of D-5?

ANSWER: In the spring of 1982, the Navy studied the feasibility of advancing the IOC of the TRIDENT II (D-5) missile. Conclusions at that time were that a one year acceleration was technically feasible with slight degradation in performance at IOC, and that any greater acceleration would result in unacceptable degradation in missile performance. The risks in acceleration would be to missile reliability and readiness; to accuracy, range and payload performance; and to the schedule. The decision was made not to accelerate but to continue with the 1989 IOC because the near term cost for the one year acceleration was not considered commensurate with the improvement in military capability that could be achieved. Although the IOC remained unchanged the program was restructured to introduce the D-5 on the ninth TRIDENT submarine (SSB-734). In addition to a slight increase in the rate of introduction of D-5 into the fleet, the restructured program resulted in a cost avoidance by not installing the C-4 capability on three submarines and later replacing it with the D-5 capability. The ultimate force objective of TRIDENT submarines, and hence of TRIDENT II missiles, has not yet been determined.

ICBM AND SLBM RETARGETING

QUESTION: Secretary Lehman, how would you compare the retargeting capabilities of our ICBM force as compared to those of our SLBM force? Would a strategic DYAD provide the United States with the targeting flexibility and prompt response time it would need to effectively execute our country's nuclear policies following a Soviet attack?

ANSWER: Retargeting either ICBMs or SLBMs assumes the survival or reconstitution of communications capability for the NCA. I understand that the MINUTEMAN III force can be promptly retargeted in response to a directive to do so. This capability also exists for the SLBM force. In fact, retargeting is a strong point for SLBMs. All SSBNs can retarget their warheads rapidly utilizing on-board fire control computer capability to construct target packages, and each SSBN has pre-stored the targets of every other SSBN. For ad-hoc coverage, the data required can be as little as latitude, longitude, and altitude of the individual installations, if they are not already in the computer memory. Not all current ICBMs can be retargeted by their crews beyond selection of a limited number of pre-stored back up aim points.

A force of bombers and SLBMs would continue to provide the targeting flexibility and prompt response time rquired following a Soviet attack, and the capability of alert bombers and at-sea SSBNs to survive a Soviet attack would ensure their presence when needed. Other factors must also be considered in ICBM/SLBM comparisons, however. First, the IOC of MX is 1986, while the IOC of D-5 is not until 1989. The MX can be fully deployed by 1989. Further, deploying all of the U.S. strategic capability in manned bombers and SLBMs eases the problem for the Soviet planner by allowing him to concentrate on only two separate threats. Diversity of systems complicates enemy problems in providing an adequate defense and in structuring credible threats to U.S. systems. Additionally, diversity in our strategic forces provides a hedge against uncertainties in system performance and unanticipated changes in the threat.

SLCMs

QUESTION: Some have argued that the deployment of Sea-Launched-Cruise Missiles (SLCMs) on attack submarines will undermine the verification prospects of any future arms control agreements. Would you highlight the Navy's plans for deploying these cruise missiles, and would you comment on this question of arms control?

ANSWER: The Navy is deploying TOMAHAWK cruise missiles on a variety of surface ships and submarines. Armored box launchers are currently installed on the battleship USS NEW JERSEY and Spruance-class destroyer USS MERRILL. A 637-class nuclear attack submarine USS GUITTARO has launched TOMAHAWK missiles from torpedo tubes. The Soviet Navy has deployed cruise missiles on all new major surface ships and most significantly on the new OSCAR-class nuclear attack submarine carrying 24 SS-N-19 anti-ship cruise missiles with a range of 500 kilometers.

SLCMs are not constrained by any existing arms control agreements. Their small size and portability make verification by national/technical means - the method preferred by the Soviet Union - impossible. Since there is no effective way of discerning the range of a cruise missile because of speed/range/payload/fuel volume trade-offs, future agreements which impose range limitations, as has been discussed in SALT II, would only compound the problem of verification. Further, any discussion of limits on SLCMs should acknowledge the geographic asymmetries that permit existing Soviet cruise missiles to threaten U.S. targets and the expanding inventory of third country manufactured SLCMs in the naval forces of Libya, Peru and Nigeria.

SALT II

QUESTION: Secretary Lehman, has the Administration's policy on SALT II compliance (i.e., not to undercut existing agreements if the Soviets do likewise) had any effect on the Navy's strategic forces programs?

ANSWER: No, the ex-POLARIS submarines dismantled as new TRIDENT submarines go on sea trials had previously been removed from the Navy's strategic forces. The remaining ex-POLARIS submarines are operating as nuclear attack submarines.

SLBM EARLY WARNING

QUESTION: Admiral Watkins, what steps are being taken to upgrade our early-warning capabilities against a Soviet Submarine Launched Ballistic Missile attack?

ANSWER: Although we are kept informed in matters regarding Ballistic Missile early warning, this is a mission area assigned to the United States Air Force. Current program status details may be obtained from the Air Force.

SSBN SECURITY

QUESTION: Have the Soviets made, or do we project them to make, any major advancements in their Anti-Submarine Warfare (ASW) capabilities such that they might threaten the survivability of our sea-based deterrent?

ANSWER: Tactical Soviet ASW-capable forces will continue to grow in capability. To date, [deleted].

As we look forward, we should expect an increasing Soviet ASW effort. Historically, the more forces devoted to ASW, the more effective the capability. Continued increase in Soviet ASW forces will result in some improvement in ASW capability. Our SSBN Security Program and the improvements in survivability we have put into our submarines and weapons systems are expected to provide sufficient and flexible response to future threats which might develop from Soviet research and provide for continued survivability of our SSBN force. [Deleted.]

SSBN SECURITY

QUESTION: Will the deployment of TRIDENT submarines and D-5 missiles provide a hedge against unanticipated Soviet Anti-Submarine Warfare advances?

ANSWER: Incremental improvements in Soviet acoustic and non-acoustic sensors are projected which could improve Soviet anti-submarine warfare (ASW) capabilities. Soviet sensor research could eventually provide some level of effectiveness against our current nuclear submarines. Our plans to counter this possible increased effectiveness include the deployment of the TRIDENT submarine and the TRIDENT missile. The longer range TRIDENT missile will permit operation of our submarines in more than ten times the present patrol area size thus increasing Soviet search areas significantly. The TRIDENT submarine incorporates significant quieting improvements [deleted] to reduce detection and complicate search by advanced sensors. The larger TRIDENT submarine also permits installation of advanced countermeasures equipment as potential threats become identified. Advances incorporated into the TRIDENT weapons system will provide increased flexibility in the range of available patrol depths and speeds. [Deleted.] Our SSBN Security Program and the improvements in survivability we have put into our submarines and weapons systems are expected to provide sufficient and flexible response to future threats which might develop from Soviet research and provide for continued survivability of our SSBN force.

SOVIET ASW

QUESTION: Are Soviet ASW capabilities more threatening to British and French sea-based nuclear forces than they are to the U.S. sea-based deterrent?

ANSWER: [Deleted.]

LONG-RANGE ASW WEAPONS

QUESTION: Secretary Lehman, could you highlight now or for the record the Navy's plans with respect to several of our ASW programs, particularly the ASW/Stand-Off Weapon System, the Vertical Launch ASROC and SUBROC? What is the funding profile for ASW/SOW and what IOC deployment schedule does this funding support?

ANSWER: The Navy's anti-submarine warfare long-range posture over the next several years will include development of the submarine-launched ASW Standoff Weapon and surfaced-launched Vertical Launch ASROC, together with phase out of the aging SUBROC.

SUBROC missile inventory will be reduced commensurate with 637 and 688 class TOMAHAWK conversions (1984-1992) and 594 class submarine retirements (1990-1996), to be replaced by the simpler, more capable ASW Standoff Weapon [deleted]. The development funding profile required for the ASW Standoff Weapon is shown below in millions of then-year dollars. It leads to an Initial Operating Capability [deleted].

	FY 83 & Prior	FY84	FY85	TO COMPLETE	TOTAL
RDT&E	85.6	28.0	63.4	455.2	632.2

The ASWSOW procurement plan, with funding beginning in 1988, will provide enough weapons to satisfy fleet loadout requirements [deleted].

MODERNIZATION

QUESTION: Admiral Watkins, there is a great deal of discussion regarding the dichotomy of readiness funding as compared to procurement funding. I find this dichotomy misleading. Would you please comment with respect to the role Navy modernization programs play in enhancing readiness and the potential impact these modernization programs could have on O&M funding requirements?

ANSWER: The readiness of the Navy is measured in three distinctly different time dimensions: tomorrow, within ten years, and beyond this decade into the turn of the century. Modernization is an essential element in the U.S. Navy's ability to meet the challenge at a given point in time.

Historical data shows that the ratio of operating costs to procurement has remained fairly stable. Looking at the current Five Year Defense Plan, we not only see this stability continuing, but a balance being struck among the elements of readiness so that we are ready throughout the continuum from tomorrow through the turn of the century.

AIRCRAFT PROCUREMENT PROGRAM

QUESTION: Secretary Lehman, are the Navy's aircraft procurement programs being funded at efficient rates of production?

ANSWER: In many cases, unit cost savings could be expected with reasonably small increases in production rates. However, funds for aircraft procurement are limited by overall fiscal contraints imposed by total funding availability for naval aviation. Aircraft procurement is prioritized to (1) satisfy immediate short term deficiencies and (2) satisfy force level achievement/maintenance/modernization requirements. While the resulting procurement plan includes several programs of low rate production, it does represent a compromise among variables to allocate resources to best satisfy current and anticipated force requirements.

Although some lines (e.g., the A-6 at six a year) are not producing aircraft at the most economical rates, they maintain the vital "competition" in the aerospace industry which in itself produces cost effective weapons systems. Additionally, low production rates, although uneconomical, provide a "warm" production base for a wartime surge capability.

BUDGET

QUESTION: Secretary Lehman, would you highlight for the committee the advances the Navy has made given the increased levels of defense funding over the past several years? Is the taxpayer's money being put to good use?

ANSWER: With increased levels of funding in the past several years, we have made substantial advances in readiness, both of personnel and material; in our ability to win a sustained conflict; and in rebuilding a modern, capable force which can fight and win.

In the personnel area, we are meeting our accession goals and even more importantly, we are seeing significant improvements in retention. Since FY 1980, first term reenlistments have risen from 37% to 50% and total career reenlistments from 44% to 79%. Much of this increase can be attributed to restoration of pay comparability, to sea pay initiatives and to selected reenlistment bonus. In FY 1983 we credit SRB with 8,300 petty officers reenlistments, saving $1.0B in training costs of replacements.

These improvements in personnel recruiting and retention are having an effect on the fleet: all ships and all forward-deployed marine units are fully manned. Aircraft squadrons are very nearly at full manning levels.

We have increased spending on spare parts and maintenance. Our 514 battle force ships have an 8% higher mission capable rate than the 469 ships of FY 1980. The average Navy and Marine Corps aviation squadron is 16% more mission capable.

Considerable progress has been made toward eliminating ordnance shortfalls and thus improve sustainability. In addition, we are continuing to improve our sealift capability, the fastest-growing portion of the Navy budget.

We expect by 1989 to reach our goal of a 600-ship Navy, a balanced force of capable combatant and support ships.

The first TRIDENT SSBN, USS OHIO, was launched in October 1982; the second, USS MICHIGAN, will be launched in 1983. We have signed a contract for construction of two nuclear-powered carriers and expect to save more than $754 million by this contracting approach. The USS NEW JERSEY was recommissioned in December 1982 and will deploy this summer, while USS IOWA will be delivered to the fleet in early 1984. The first AEGIS cruiser, USS TICONDEROGA, was commissioned in January, bringing the most effective anti-air warfare system ever designed to the fleet. This ship is not only highly capable, it is significantly less manpower-intensive than previous combatants. Twenty years ago a cruiser required over 1,600 enlisted men and 116 officers. The much more capable CG-47 which it replaces is manned by 300 enlisted men and 26 officers.

We have increased aircraft procurement and are beginning to see the effects on aircraft inventory of increased procurement and great improvement in aviation safety. We currently have 370 more aircraft in active inventory than we had two years ago. The F/A-18 strike fighter will give naval aviation new flexibility as it replaces the F-4 and A-7. It has outstanding air-to-air performance, superior maneuverability, improved reliability, maintainability and survivability.

In summary, the taxpayers' money is being put to good use. We have been fielding new weapons systems with great capabilities, redressing serious shortages in ordnance and spare parts, and most importantly, improving personnel and material readiness. We have aggressively pursued such moneysaving initiatives as dual sourcing, multi-year contracting and yearly buys in economic quantities and at economic rates wherever feasible in order to ensure that the money allocated to us is indeed well spent.

QUESTIONS SUBMITTED BY SENATOR McCLURE

BATTLE FORCE

QUESTION: It has recently been reported that the Navy is moth-balling more ships, even some recently overhauled ships, than are being built. Please give a table summarizing status of the fleet over the next five years.

ANSWER: Following are projected Navy battle force figures for the end of the next several fiscal years:

End Fiscal Year	Total Battle Force
1983	509
1984	527
1985	546
1986	556
1987	569
1988	582
1989	600
1990	608
1991	610

TOMAHAWK

QUESTION: Why are TOMAHAWK cruise missiles being cut by 188 missiles in FY 1984?

ANSWER: The SLCM buy for FY 1984 was reduced based on overall affordability issues of the total FY 1984 Defense Department Budget.

TRIDENT I MISSILE PRODUCTION

QUESTION: Why is TRIDENT I SLBM production being cut in FY 1984 and zeroed in FY 1985? How much funding is there available to be reallocated to TRIDENT II SLBM R&D?

ANSWER: The TRIDENT I missiles being procured in FY 1984 are the last of the planned production buy. The reduction in FY 1984 and 1985 resulted from the decision to introduce the TRIDENT II missile system into an earlier new construction submarine than had been previously planned; and a decision to reduce the number of TRIDENT I missiles to be flight tested in the operational testing program. Funding levels included in this budget submission have been adjusted accordingly, thereby precluding the availability of any WPN funds for reallocation.

Lebanon Cost

QUESTION: What has been the cost of the Navy - Marine Corps deployment in Lebanon?

ANSWER: The incremental costs, which are over and above what is in the FY 1983 budget, for the first quarter have totaled $27.9 million consisting of the following:

	($ in Millions)
Ship Steaming Days	17.4
Aircraft Operations	6.9
Marine Corps Equipment Airlift	1.7
Other Support (Travel, etc.)	1.9
Total	$27.9

600 SHIP NAVY JUSTIFICATION

Question: Why does the US need 600 ship Navy? Give a precise and coherent strategic rationale.

Answer: At the peak of our Viet Nam involvement, the US Navy comprised one thousand combatant ships. Today we have less than half that number. Recognizing America's historic and growing dependency on the free use of the seas, its need for allies, for resources, for energy, and for commerce, the Soviets have taken advantage of the attractive opportunity provided by our halving of American naval forces. Today, they posses the world's largest modern navy, as measured by total ships. No longer a coastal defense force, it is a global blue-water offensive maritime force that, in addition to defending its own assets, is designed, equipped and trained to interdict our lifelines and access to the world; to dispossess us of allies, resources and trade. In short, if our deterrence fails, to strangle us.

The vital interests which make up the boundaries of our maritime tasks are relatively straightforward. They are provided by some 40 treaty commitments entered into by the US government and by the new realities of energy dependence. These commitments bind our fortunes to all the world's great oceans - the North and South Atlantic, the Caribbean, the Norwegian and Barents Seas, the Mediterranean, the Indian Ocean and Persian Gulf and the Southwest and Northwest Pacific. Two of our states, Alsaka and Hawaii, are not contiguous to our shores. From which of these vital areas would anyone seriously suggest we withdraw? It must then be clearly recognized that withdrawal is the only alternative to a major naval force expansion. Today the growth of the Soviet global navy has eliminated the option of planning for a regionally limited naval war with the Soviet Union.

The US maritime capabilities and tasks requisite to such a strategy are:

a. Maintain a survivable and capable sea based nuclear deterrent.

b. Keep open the sea lines of communication which permit the United States to maintain a credible forward deployed posture on land areas abroad.

c. Operate offensively on a global basis capitalizing on the geographic disadvantages of our adversaries.

d. Sustain a level of fighting in wartime sufficient to contain initial enemy actions, and then gain advantage to ensure eventual US victory.

e. Provide and support a flexible regional response to aggression.

f. Retain strong residual forces for war termination and negotiation of peace.

The adminstration's objective is a 600 ship Navy based on 15 aircraft carrier battle groups. The force that those numbers symbolize is derived directly from minimum forces necesary to carry out the strategy outlined above. The number of battle groups necessary to avoid turning any of our maritime areas over to Soviet control is calculated on a number of factors: the advantages of geography that exist, the substantial contributions that US Air Force and allied navy and marine forces can add, and the strike capability that only US battle groups can provide. The minimum force level necessary to carry out a strategy that would result in the proper maintenance of all our vital interests is 15 battle groups or about 600 ships.

Our vital maritime interests described will, in the event of a global conflict with the Soviet Union, require the Navy to maneuver worldwide and engage forces in multiple vital areas of the world. We don't have that ability now with our 13 deployable carrier battle groups. When we reach a 15 carrier 600 ship Navy, by 1990, we will have the necessary maritime capability to do so with prudent risk.

POLARIS SUBMARINE DEACTIVATION

QUESTION: Why are Polaris submarines being deactivated, and under what legal authority?

ANSWER: Under the provisions of the Interim Agreement on Strategic Offensive Arms (SALT I), the United States is limited in the numbers of strategic ballistic missile submarines and launchers it may have. When that number is exceeded by new construction (TRIDENT submarines with 24 launchers), the agreement requires compensation be made by dismantling older, less capable submarine launchers. In May, 1982 President Reagan announced that the United States would take no actions to undercut existing arms control agreements as long as the Soviet Union did likewise. Navy actions are in consonance with the President's statement.

SALT

QUESTION: Secretary Lehman, please give your own personal views about the legal status of U.S. unilateral compliance with SALT I and SALT II. Were you reprimanded in March 1981 for saying U.S. compliance was illegal?

ANSWER: The President's START proposal has built upon the experience of the SALT process. [Deleted] U.S. policy [deleted] [deleted] is intended to contribute to achieving our START goals of substantial reductions, equality, security, and verifiability. We are carefully reviewing Soviet actions and U.S. security requirements; our compliance actions are not unilateral. The Soviets are dismantling their older SSBNs as their new DELTA III and TYPHOON SSBNs go on sea trials. I was not reprimanded at any time for statement on SALT.

QUESTION: Are the Soviets violating SALT II, Secretary Lehman?

ANSWER: [Deleted.]

SPINNEY TESTIMONY - COST UNDERESTIMATES

QUESTION: Comment on Mr. Spinney's testimony that the U.S. defense budget should be increased, and that defense cuts would only exacerbate the historical problem or programmatic cost underestimates.

ANSWER: The essence of Mr. Spinney's testimony is that, for a number of reasons, DOD's Five Year Defense Plans have historically underfunded the procurement accounts. Among the reasons postulated for this is that projected declining unit costs in the outyears have been overestimated. This overestimation leads to substantial underfunding because the bulk of procurement occurs in the outyears under the projections of low unit cost. One of the key factors, although certainly not the only one, leading to overestimation of the decline in future costs is program instability caused by annual unprogrammed budget decrements usually in Congress. For example, a $4 billion outlay reduction in the Navy budget, if taken in the readiness account, could cause a reduction of up to 50 percent in overall steaming and flying hours and a reduction in end strength of about 10,000 petty officers. A $4 billion TOA cut in procurement will substantially increase the unit cost of our ship and aircraft building plans. These budget decrements result in program stretch-outs which reduce annual produciton rates which, in turn, preclude realization of the projected decline in unit costs and drive up total program costs further.

There is much greater awareness of this phenomenon, both in the Navy and in the Congress, and so history does not have to repeat itself. In fact, in the last two years our rate of unprogrammed cost growth has been substantially reduced due to a whole range of effective management initiatives. As these take greater effect in future years, the "inexorable trend" on which Mr. Spinney bases his dire predictions should be entirely reversed.

Given that the President's Budget reflects those programs needed to support the strategy, any reduction to that program will exacerbate traditional cost problems by increasing program instability. This adversely affects our security programs by deferring needed programs and increasing unit costs by program instability.

U.S.- SOVIET BUDGETING PROCESS

QUESTION: The Soviets have a relatively rigid Five Year Defense Plan. In contrast, because of the Congressional appropriations process, the U.S. has a rolling one year defense plan. Please comment on the differences between the U.S. and Soviet defense planning processes, and the implications of those differences.

ANSWER: The Department of Defense plans on a five year basis. Because Congress appropriates funds on an annual basis, the plan is executed from year to year. Our appreciation of the Soviet process is that it is a more rigid one, in which the future threat to Soviet interest is estimated in the third year of the current five year plan and defense program structured in the fourth year for execution in the subsequent five year plan. Once adopted, this type of planning is less flexible in execution than our process.

Our system responds more quickly as and our defense requirements change, or as new technologies emerge. However, our system poses problems in that defense contractors cannot rely on defense procurement plans sufficiently stable to make major investments in production capacity or to maintain a stable work force of skilled technicians, engineers and artisans. We have undertaken major management initiatives such as multi-ship/multi-year contracting, greater competition for major contracts, etc., that are realizing greater stability in our programs, avoiding the ragged ups and mostly downs of five year plans changing from year to year. This greater stability in our industrial base also realizes lower production costs. As an example, the effect of authorizing the construction of the two nuclear powered aircraft carriers (CVN 72 and CVN 73) in FY 83 will result in a cost savings of over $750 million for the two carriers and an early delivery of the ships that totals 44 months of time that otherwise would have been used for production alone. It also facilitates the 14 month early delivery of CVN 71, now under construction.

CIA COSTING

QUESTION: A methodological question arises relative to Mr. Spinney's testimony. The CIA's method of estimating defense expenditures is called "direct costing." Soviet defense expenditures are translated into U.S. expenditures for similar systems. If the Defense Department has been systematically underestimating U.S. defense program costs, and if U.S. defense program costs are used by CIA in estimating Soviet program costs, what are the implications of Mr. Spinney's testimony for CIA's estimates of Soviet defense spending? If the DOD has underestimated its own program costs, has the fact that CIA's estimate methodology is dependent on U.S. program cost estimates similarly exacerbated the CIA's tendency to underestimate Soviet defense program costs?

ANSWER: In answer to the first question, Mr. Spinney's testimony has no direct relation to CIA's estimates of Soviet defense spending. CIA Soviet estimates are based on historical U.S. costs and allow for ± ten percent error in their estimates of Soviet defense spending. The U.S. budgetary process, on the other hand, deals with projected costs. The CIA, therefore, estimates Soviet defense spending based on actual dollars in the year in question and not on projected dollars.

The answer to your second question could best be addressed by the CIA; however, based on the CIA methodology it would seem that their estimates would not be directly affected by U.S. underestimation of projected costs. Additionally, CIA estimates of the dollar costs of Soviet defense activities are revised each year to take into account new information improvements in costing methodologies, and new assessments of the size, composition and technical characteristics of the Soviet forces and activities.

This estimative process is not an exact one, as the CIA would surely be the first to admit, since it depends on a myriad of data, much of which itself must be estimated, based on equally elusive data. However, the CIA estimate remains the most sophisticated and reliable means of determining Soviet defense expenditures and has been tested and revised over decades of experience.

USMC REAL GROWTH

QUESTION: Why is the Marine Corps receiving only minus 1% real growth?

ANSWER: The Marine Corps budget is the result of a long process of balancing requirements with resources available to accomplish our mission. The result of this process for the FY 1984 budget is one percent negative real growth. And, although there are always some programs that fail to survive the competitive nature of the Executive budget process, I am satisfied with the result for FY 1984.

More specifically, the main factor contributing to the overall minus 1% real growth is the Procurement, Marine Corps appropriation which reflects a minus 11.7% growth. The Marine Corps FY 1983 procurement budget was significantly increased by OSD during the final stages of budget development in order to enhance the Marine Corps readiness and sustainability posture. This higher level of procurement funding could not be perpetuated in FY 1984.

BUDGET

QUESTION: Why is the Navy's real program growth only 2.1%, if the defense budget as a whole is growing at a rate above 5%?

ANSWER: Actually, the Navy's growth rate is 2.1% and the Marine Corps rate is a minus .9%, giving the Department of the Navy a growth rate of 1.9%. In any case, our budget is based on an analysis of requirements in a particular fiscal year, in this instance fiscal year 1984, and not as a percentage of real program growth. Since real program growth is a measure of year-to-year program changes, the question can only be answered by an analysis of all the changes that have occurred between the FY 1983 and FY 1984 budgets. There are, of course, thousands of such changes, both increases and decreases. Major decreases in real program in FY 1984 have occurred in shipbuilding (-26.3%), Marine Corps procurement (-11.7%) and the Family Housing appropriation (-10.2%). These decreases have been offset by increases in stock fund procurement (+82.9%), Other Procurement, Navy (+30.7%), Research and Development (+28.0%), Military Construction (+18.4%), Reserve Personnel (+11.1%), and Weapons Procurement (+10.4%). These varying increases and decreases in real terms simply reflect the annual funding variation of different programs. If we look at the average annual real program growth from FY 1981 to FY 1984, we see that the DON average (9.4%) is closer to the DOD average (10.5%), although it is still somewhat lower.

SHIP DEACTIVATION

QUESTION: Describe the reasons that the Navy is deactivating 5 ships in FY 1984. Were any of these ships recently overhauled or modernized? Does any service life remain in this ships?

ANSWER: The Navy is deactivating 3 SSBNs and 2 LSDs in FY 84. The submarine [deleted] are being decommissioned under the President's policy not to undercut existing strategic arms limitations agreements. Two of the submarines will have been out of overhaul about 5 years, the third 8 years, when they are deactivated. Commissioned between 1959-63, these ships will have completed over 90% of their service life in FY 84. The LSDs [deleted] are being decommissioned as part of the Navy's effort to reduce operating budgets. One completed overhaul in 1978, the other in 1981. Both ships will be within 6 months of the end of their 30 year service lives when deactivated.

MEGATONNAGE REDUCTION

QUESTION: Secretary Lehman, your statement says that U.S. nuclear megatonnage had been cut in half over the preceding ten years. By how much is U.S. nuclear megatonnage cut by deactivating unilaterally 160 POLARIS SLBMs, 54 TITAN II ICBMs and 80 B-52D bombers? How much more megatonnage is cut by reducing MX ICBM deployment from 200 to only 50?

ANSWER: To answer the specifics of your question, deactivation of 160 POLARIS SLBMs and 54 TITAN ICBMs represents a reduction [deleted]. The deactivation of 80 (75 operational) B-52D bombers reduced our delivery capability [deleted]. Each PEACEKEEPER missile will carry [deleted]. The planned deployment is generally considered to be 100 missiles.

B-52D bombers (and their bombs) are 25 to 30 years old, are not as accurate as newer model B-52s, and are not as effective against defended targets because of their old avionics systems. POLARIS SLBMs were over 20 years old when retired from their strategic role, and were high-yield, inaccurate systems. The problems associated with the age of the TITAN system are well documented. It is also a relatively inaccurate, high yield system.

All of those systems are being replaced by modern systems that strengthen the U.S. nuclear deterrent in the 1980s: B-52D capability is being replaced by deploying accurate, highly capable cruise missiles on the B-52Gs and B-52Hs. POLARIS submarines are being replaced by the TRIDENT I (C-4) system in the remarkably quiet and capable TRIDENT submarine. And the TITAN will be replaced shortly after its retirement with the far more capable PEACEKEEPER ICBM.

MARITIME SUPERIORITY

QUESTION: Secretary Lehman, if the U.S. seeks naval superiority over the Soviets, do we also still seek overall military and technological superiority over the Soviets as the 1980 Republican Platform stated?

ANSWER: During his remarks at the recommissioning of the battleship, USS NEW JERSEY, on December 28, 1982, President Reagan stated: "The United States is a naval power by necessity, critically dependent on the transoceanic import of vital strategic materials. Over 90 percent of our commerce between the continents moves in ships. Freedom to use the seas is our nation's lifeblood. For that reason, our Navy is designed to keep the sea lanes open worldwide, a far greater task than closing those sea lanes at strategic choke-points. Maritime superiority for us is a necessity. We must be able in time of emergency to venture in harm's way, controlling air, surface and subsurface areas to assure access to all the oceans of the world. Failure to do so will leave the credibility of our conventional defense forces in doubt. We are, as I said, building a 600-ship fleet, including 15 carrier battle groups. But numbers are not the final test. Those ships must be highly capable." The President very clearly and publicly restated his intention regarding maritime superiority. I would add that since the Soviet Navy outnumbers our Navy, maintaining maritime superiority requires U.S. ships of advanced quality. To achieve this, strong and continued emphasis must be placed on new and improved technology.

QUESTIONS SUBMITTED BY SENATOR ANDREWS

F/A-18

QUESTION: The Navy is requesting 84 F/A-18's in FY-84. When is a decision on F/A-18 production for attack mission requirements expected?

ANSWER: The DSARC principals met on 8 December and recommended to the Secretary of Defense that the F/A-18 be authorized for procurement for all planned mission applications. The Decision Memorandum has been forwarded to the Deputy Secretary of Defense for his signature.

AIRCRAFT MIX

QUESTION: Can you elaborate on the type and scope of studies, using a mix of F/A-18's, F-14's and A-6E's that will be conducted for the purpose of helping the Navy decide on the final number of F/A-18's it should buy. When is a report on the studies expected?

ANSWER: As the Navy gains experience with the F/A-18 and its newer capabilities become integrated into air wing tactics, optimum air wing mixes will be established. A program for evaluating the best composition of carrier air wings by varying the mix of F-14, F/A-18, and A-6 aircraft has now been formalized and will be put into operation this fall in USS JOHN F. KENNEDY. KENNEDY's air wing will evaluate the effectiveness of an all A-6 and F-14 air wing, with the A-6 filling all attack missions. During the next evaluation phase, USS CONSTELLATION will begin work-ups in FY-84, then deploy in FY-85 with the first operational Navy F/A-18 squadrons assigned as direct replacements for existing A-7 squadrons. In addition, USS CORAL SEA and USS MIDWAY will be converted to support and deploy the F/A-18 in place of both F-4 and A-7 squadrons. Reports on the effectiveness of these air wings will be available upon completion of their respective deployments.

F/A-18

QUESTION: You have a four year multiyear procurement request of 818 F404 engines for the F/A-18. Will all of these engines be needed if the decision is made not to use the F/A-18 to fulfill the Navy's attack mission requirements?

ANSWER: Yes. The Marine Corps/Navy fighter requirements would exceed the four-year multiyear procurement request of 818 F404 engines.

DEFENSE PROCUREMENT IMPROVEMENTS

QUESTION: In GAO's recent assessment of Admiral Rickover's recommendations to improve defense procurement, the Admiral feels that government support of industry-initiated research and development is a subsidy, monitoring by DOD is superficial, and there are no rights to the work paid for. The report mentions that the Navy has recently redesigned its program which monitors industry-initiated research and development. Could you furnish more details on the revised Navy program which monitors these contract activities?

ANSWER: The Navy has conducted a complete reorganization of its technical management of the industry Independent Research and Development (IR&D) Program. The purpose was to increase visibility and awareness of IR&D accomplishments in the Naval Systems Commands and the R&D Centers and to improve communication of Navy needs to industry for consideration in its IR&D planning. By reviewing IR&D as a complement to its in-house technology base, the Navy's program planning is enhanced by a more complete picture of available capabilities and alternative solutions to problems. In turn, more timely and pertinent feedback to companies on their individual IR&D programs, improved access to Navy planning and requirements documents, and increased numbers of Navy-industry technical briefings improves the ability of industry to focus their IR&D project selection toward DoD needs.

The reorganization began in early FY 82 with the transfer of IR&D technical responsibility from the Chief of Naval Research to the Chief of Naval Material, in order to better integrate IR&D review procedures and to increase program visibility into the Navy Systems Commands and R&D Centers. The first Navy IR&D Program Management Office was established in the Office of Naval Technology. The objectives of the Office are: (1) to maintain active two-way communication between Navy and industry research and development programs; (2) to establish and administer a uniform Navy system for IR&D technical assessment and on-site review participation; and (3) to establish a strong linkage between the IR&D technical review and ceiling negotiation processes.

The following actions have been taken to accomplish these objectives:

Program Funding. Funding has been provided to participating Navy activities to cover the costs of labor, on-site review travel, and technical plan evaluation.

Lead Evaluators. Technical evaluation responsibilities have been reassigned from the Office of Naval Research to other Navy activities more closely aligned with the specific technical areas of the individual companies. A single senior Navy manager (Lead Evaluator) is assigned for each Navy-evaluated company to coordinate the DoD technical review and to maximize coupling and influence with industry programs.

Activity Focal Points. An IR&D focal point, responsible for coordination of the IR&D technical evaluation process, has been assigned at each major Navy activity. The Focal Point ensures that the activity technically reviews and interacts with the IR&D programs of companies with product areas of interest.

DEFENSE PROCUREMENT IMPROVEMENTS

Communication with Industry. Formal and informal technical interchanges occur regularly between Lead Evaluators and their assigned companies, as well as between Navy activities and companies working in common technical areas.

On-Site Reviews. Funding has been provided at each Navy activity for on-site review participation. The Navy is working to ensure that the reviews are two-way information exchanges which include participation of senior and mid-level technical managers. On-site review participation by Navy personnel increased approximately five-fold in 1982.

Negotiation Support. Each Navy Lead Evaluator participates in the assigned company's IR&D/B&P ceiling negotiation as a technical expert and advisor to the Tri-Service Negotiator Staff.

These represent only a few of the positive steps that the Navy has taken to utilize industry's expertise and to complement its in-house efforts. The key is a substantive, two-way communication flow between Navy and industry -- communication at all levels, including group exchanges and one-on-one discussions. IR&D accomplishments are considered in Navy planning; the Navy's plans and requirements are made known to companies with appropriate capabilities. Navy participation in IR&D technical plan and on-site reviews is encouraged. Navy reviewers are asking more questions, providing more critical and explicit comments, and generally taking advantage of the opportunity to influence IR&D planning by communicating with industry. Response from industry has been overwhelmingly positive. The Navy recognizes IR&D as an excellent source of innovation and technological opportunities and intends to continue to maximize its use.

DEFENSE PROCUREMENT IMPROVEMENTS

QUESTION: Admiral Rickover recommends requiring certification in budget requests that sole-source shipbuilders have agreed to suitable terms and conditions. He believes the Navy should use its decisions on what will be included in the budget as leverage to help resolve contractual differences with sole-source contractors. GAO believes linking sole-source issues with budget decisions has merit. How does the Navy feel about it?

ANSWER: The Department of Defense has already reviewed Admiral Rickover's suggestion and it is our position that the recommendation is impracticable. Among the reasons for this are:

--Such agreement with a contractor prior to congressional authorization and appropriation would prejudge congressional action.

--The Congress already has sufficient opportunity to be assured that suitable terms and conditions are being obtained prior to contract award through the Navy business clearance review and Chief of Naval Material approval, congressional notification, and hearings.

--Agreement between the Government and the contractor on suitable terms and conditions would require the preparation of a contractor proposal and negotiation of that proposal. These negotiations would be taking place 2 or 3 years before the parties could consummate a contract and the contractor would have to include significant protection or contingencies (price and other factors) to offset a dynamic marketplace.

--Final negotiations at the time of contracting would be required and changing circumstances may modify prior agreements. Thus, the recommendation would require duplicate and unnecessary expenditure of effort on the part of both parties.

CONTRACTOR CLAIMS

QUESTION: There is no time limit on contractor claim submissions. They can wait years to determine contract profitability and then claim enough to cover contract overruns. Admiral Rickover recommends a one year time limit for submission of fully documented claims. GAO concurs that a time limit is needed. What are the Navy views on an appropriate time period?

ANSWER: The Navy's position relative to establishing a time limit on contractor claims submissions is expressed as the Dod position in GAO Report "Assessment of Admiral Rickover's Recommendations to Improve Defense Procurement," (OSD Case #6151). i.e., DoD agrees to the desirability of legislation that would provide a statute of limitations on the submission of claims, as well as possible amendments providing prompt notification of alleged changes and periodic releases from claims.

Neither the Navy nor the Department of Defense knows, without additional analysis, whether a one year time limit is a practical and appropriate statute of limitations. The Department of Defense is the lead agency on this issue and is expected to investigate and examine the effect of a statute of limitation on defense contracting.

EQUIPMENT FOR THE NAVAL RESERVE

QUESTION: In FY 1984 defense budget testimony, $500 million is for equipment and costs of the Guard and Reserves. How much funding is requested for the Navy Reserve? What is the equipment requested for these components?

ANSWER: Equipment funding for the Naval Reserve is contained in two appropriations: $11.2 million in the Other Procurement, Navy appropriation and $39.9 million in the Aircraft Procurement, Navy appropriation as follows:

FY 1984 NAVAL RESERVE OPN/APN REQUESTED FUNDING

$ (Millions)	Purpose
1.6 (OPN)	Tools and equipment for the Reserve Surface Intermediate Maintence Activity Long Beach.
2.2 (OPN)	Cryptologic equipment for Reserve Security Group units.
1.9 (OPN)	Trucks, trailers, drilling and blasting equipment, weight handling equipment and fire fighting equipment at several Reserve Naval Air Stations and Reserve Readiness Commands.

5.5 (OPN)	Shipboard Simulators, Damage Control Trainers and minor training devices for support of Reserve training.
39.9 (APN)	Aircraft modifications, power plant changes, common avionics changes and flight safety changes. ($39.9 million for Naval Reserve APN plus $26.3 million for Marine Reserve Aircraft Procurement <KC-130R and support equipment> total a $66.2 million combined APN request.)

Marine Corps Procurement Budget

UNCLASSIFIED

QUESTION: In FY 84 defense budget testimony, $500 million is for equipment and costs of the Guard and Reserves. How much funding is requested for the Navy Reserve and Marine Corps Reserve?

ANSWER: FY 1984 Marine Corps Reserve funding includes $53.6 million for the Operation and Maintenance, Marine Corps Reserve (O&MMCR) Appropriation, $177.3 million for the Reserve Personnel, Marine Corps (RPMC) Appropriation and $45.6 million for the Procurement, Marine Corps (PMC) Appropriation.

UNCLASSIFIED

QUESTION: What is the equipment requested for these components?

ANSWER: The equipment planned for procurement in the FY 1984 Procurement, Marine Corps budget is as follows:

FY 1984 Procurement, Marine Corps

Marine Corps Reserve Equipment

Item	Quantity	Amount
M2 MACH GUN CAL 50	1,184	$9,637
MACH GUN SAW	930	3,523
M19 MACH GUN 40mm	109	3,003
NIGHT VISION GOGGLES AN/PVS-5A	314	2,556
5 TON RETROFIT	518	12,323
TRUCK, 1 1/4 TON DIESEL	487	4,397
SHOP SET, AUTOMOTIVE, SUPPL, 3rd ECH	4	167
SHOP SET, AUTOMOTIVE SUPPL, FM	1	123
SHOP SET, AUTOMOTIVE FUEL/ELECT SYS	2	78
CLEANER, STEAM PRESSURE JET	6	51
TESTER, FUEL INJECTOR PUMP	8	284
DETECT SET, MINE PORTABLE	4	3
AIR CONDITIONER MCS HORIZ. 60HZ 9000 BT	29	242
AIR CONDITIONER MCS HORIZ. 60HZ 18000 BTU	16	140
TRACTOR, MED FULL TRACKED	22	3,314
TOOL KIT, PIONEER ENGINEER PLATOON	30	151
SHOP EQUIP. GEN. PUR	2	521
SHOP EQUIP. CONT. MAINT.	14	525
WATER DIST. EQUIP.	5	34
PETROLEUM TESTING KIT	10	32

OUTBOARD MOTOR, SILENT RUN	9	32
INFLATABLE BOAT, SMALL	22	155
REINFORCEMENT, SET, MGB	6	4,196
GENERATOR SET, 3KW 400HZ	14	66
TOTAL		$45,553

JAPANESE DEFENSE EFFORTS

QUESTION: With reports of the Soviet buildup around Japan and East Asia threaten to overwhelm existing forces there, how optimistic is the Navy that in the near term Japan will make progress in its capability to defend its own territory surrounding seas and sea lanes out to 1,000 miles?

ANSWER: Japan's current Defense Program Estimate is predicated on fulfillment of the 1976 Defense Program Outline by 1988. The standards of the 1976 Defense Program Outline do not provide for air and naval forces adequate to defend Japan's territory or its sea lanes against the threat. The Government of Japan needs to realistically assess the current and projected threat and acquire the forces necessary to defend itself and protect its sea lanes. While we do not see the requisite capabilities reflected in Japanese near term defense plans, we are encouraged by recent statements of Prime Minister Nakasone on defense and the initiation of a joint US-Japanese study of the requirements for protection of the sea lines of communications.

AV-8B

QUESTION: $47 million is budgeted for development of a two-seat version of the AV-8B (V/STOL) aircraft. Each single seat plane now costs $28 million. Why is it considered necessary to have a two-seat version and what is its projected cost?

ANSWER: Prior experience with the AV-8A and TAV-8A has confirmed the requirement for a two-seat VSTOL trainer. The TAV-8B will reduce the FRS requirement from 40 AV-8B's to 15 TAV-8B's and 18 AV-8B's and reduce estimated annual training flight hours from 14,400 to 10,700. Additionally, AV-8B - TAV-8B commonality will provide maximum positive training transfer and logistical commonality. TAV-8B airframe/contractor furnished equipment costs are higher than the AV-8B but unit flyaway costs are projected to be equal because of uninstalled government furnished equipment which is not required in the TAV-8B.

BUILD AND CHARTER PROGRAM

QUESTION: When is a ruling by the IRS expected on the tax aspects of the Navy's build and charter program for cargo ships? Some reports indicate that leasing these ships will cost the taxpayers 15-20% more than if the ships were purchased directly. Can you respond to this?

ANSWER: An IRS ruling on the tax aspects of the TAKX program can only be requested by the taxpayer; i.e., the Owner, and then only when all the financing documents are executed. It is anticipated that this will occur towards the end of 1983 and a ruling resolving all tax issues will be received well before the delivery of the first ship in August 1984. The reports indicating that chartering the TAKX ships is more expensive than a direct purchase used different methodologies and assumptions than the three studies performed by non-government experts and the House Armed Services Committee Investigative and Survey Staff last year. We believe that the reports prepared by the outside experts, which showed chartering to be less expensive than a direct purchase, utilized a more accurate and proper methodology.

NAVY IMPLEMENTATION OF SECDEF GUIDANCE

QUESTION: I was pleased to see that Secretary Weinberger, in a June memorandum to the Secretaries of the Army, Navy, Air Force and the Chairman, JCS, re-emphasized DoD directive 1225.6 which directs units that fight first shall be equipped first regardless of component. He ordered that the equipment inventory reporting systems identify obsolete as well as quantitative shortages in Guard and Reserve equipment; that the Services evaluate the progress of Guard and Reserve equipment fill; present a plan to correct deficiencies; and evaluate to what degree the respective services are meeting the annual program and budget projections. Can you provide this committee with the progress the Navy has made to implement these directives?

ANSWER: Under Total Force Policy, the Naval Reserve is an integral part of the total Navy. Complete integration of the Naval Reserve into the total Navy requires that the Naval Reserve be provided equipment, facilities, and other logistic support comparable to that provided the active Navy. Reserve equipment must be compatible with that of the active Navy in order to achieve effective command and control and provide sufficient capabilities to counter the threat in any area employed.

In the past, the source of major equipment items for the Naval Reserve forces has traditionally been the fallout from the active Navy of older equipment that is replaced with new or updated models. This procedure permitted the peacetime deployed forces to possess the most modern equipment for immediate use in a premobilization situation, maximized the useful life of somewhat less capable but still effective equipment and permitted the retention of affordable mobilization forces. In an effort to upgrade the Naval Reserve to provide mission-capable forces immediately upon mobilization, major steps have been taken to modernize the Naval Reserve forces with newer equipment that is compatible with that of the active Navy.

Improvement in the Naval Reserve surface force is continuing with the transfer of three FFG-7 class frigates, scheduled to join the six FF-1052 class frigates transferred to the NRF in FY 1982 and FY 1983. Current plans are to attain an NRF fleet of eight FF-1052 class and sixteen FFG-7 class frigates by FY 1988. Naval Reserve shore intermediate maintenance activities are being established to support these ships. An aging NRF fleet of ocean minesweepers is also undergoing service life extension measures until a new class of replacements, mine countermeasures ships, is available in the outyears.

The Naval Reserve air forces are also being modernized. In FY 1984 new aircraft will be introduced into the Naval Reserve and active force at the same time with the introduction of the F/A-18, which replaces an A-7B squadron in the Reserves. Other force modernization actions include the transition of HS squadrons to HSL (LAMPS) squadrons utilizing SH-2F aircraft; the updating of one of two carrier airborne early warning squadrons with E-2C aircraft; and the continuing replacement of the aging C-118 Reserve logistic support aircraft with the lease/purchase of DC-9 aircraft. In FY 1984 eight to ten additional DC-9s will be leased for one year. The purchase of a like number of DC-9s is planned in FY 1985. In FY 1984 the squadron augmentation unit training program will be expanded to include F-14A, A-6E, and E-2C flight crews. These crews will be trained to ensure compatibility with their gaining commands upon mobilization.

Major equipment shortfalls remain in the Reserve Construction Forces, Cargo Handling Battalions and Beach Groups. In addition to Construction Forces equipment shortages contained in the equipment list, the Construction Forces have a sizable shortage of construction tools/kits, clothing, bedding/tents, cargo equipment and consumables.

The equipment requirements of the Naval Reserve are reviewed annually and included in the Total Navy requirements, the sum of which far exceeds funds available. The items funded are those which will result in the highest readiness of the earliest deploying units of the Total Navy. The highest priority equipment requirements are designated for forces deployed in peacetime. In some cases Naval Reserve forces will be deployed in a contingency prior to some non-deployed active forces. For example, some NRF Minesweepers may be required to clear ports to permit deployment of other forces. For this reason Minesweepers are given high priority for modernization and replacement. In other cases, such as construction battalions and other Advanced Base Components, equipment is maintained in the War Reserve Stock for issue to the earliest deploying forces whether active or Reserve.

In summary, considerable progress is being made to modernize and upgrade the Naval Reserve forces and the shortfalls are currently being reviewed as part of the annual review of the Total Force requirements.

QUESTIONS SUBMITTED BY SENATOR KASTEN

MANNING THE 600 SHIP NAVY

QUESTION: Your stated goal is to establish a 600 ship Navy. Yet even with 514 ships currently on active duty, the Navy is short some 14,000 petty officers. Can the Navy sustain a 600 ship Navy?

ANSWER: Navy is embarked on a planned program to man the 600 ships while at the same time eliminating the petty officer shortfall. Growth of the additional personnel will be accomplished by sustaining the successes of an aggressive recruiting program and strong retention initiatives. With the positive momentum gained over the past two years we have stabilized our accession goals at approximately 100,000 and predict elimination of the petty officer shortfall by 1988, despite the growth in end strength necessary to meet the personnel requirements of a 600 ship Navy. With the continued Congressional support of Navy compensation issues, our retention levels will remain high, recruiting and training resources will be available and the Navy will achieve the growth necessary to meet the personnel requirements associated with manning the 600 ships.

PROPOSED PAY FREEZE

QUESTION: What impact will the proposed pay freeze have on the Navy's ability to reduce the shortage of non-commissioned officers?

ANSWER: Navy men and women are aware of our economic condition and are willing to do their part to improve the national economy. A one year pay freeze can be accommodated if there is a firm commitment to restore comparability next year, and the other elements of military compensation remain stable. Continued progress in reducing the petty officer shortfall will require your strong support of the integrity of the military retirement system, and full funding of the travel reimbursements and special pays and bonuses. In the long term, if careerists perceive a reduced commitment from the Federal Government to adequately provide for the men and women in uniform, the effect would be to seriously reduce the Navy's ability to retain our careerists and reduce our petty officer shortage.

600 SHIP NAVY

QUESTION: On the other hand, is ship construction proceeding at a rate fast enough to provide for replacement of those escort ships in particular that will approach the end of their useful life in the early 1990's?

ANSWER: Our current frigate force, including the FFG 7 class ships under contract and in construction, satisfies our numerical requirement for the low-mix escorts. We do however have a critical need to replace the guided missile ships of the DDG 2 and DDG 37 class which will reach the end of service life in the early 1990s time frame. The DDG 51 program has been structured to provide modern, battle group capable ships which will replace these older DDGs.

NAVY'S CARRIER PROGRAM

QUESTION: I have been a strong supporter of the Navy's carrier program. Clearly a major strategic imperative is to keep the world's sea-lanes open in the event of war, and carriers are a significant contribution to this end. But some strategic analysts have called into question the Navy's emphasis on big carriers. They do not wish to replace all big carriers with small ones, but they point out that there is a time when numbers do make a difference, and that a mix of large and small carriers would enhance military effectiveness. What is your response to this?

ANSWER: Only the large deck carrier with her modern, flexible air wing and the offensive and defensive power of supporting surface and subsurface units has the full range of capability to meet the entire spectrum of threats regardless of where or how they emerge.

The Navy has seriously and professionally examined alternate basing schemes to determine what size, type and configuration of ship would provide the best basing for current and future aircraft and what the total capacity of the basing structure should be. In considering these alternative structures, emphasis has been on warfighting capability, operational suitability, life cycle costs, survivability and sustainability. All studies and analyses point to a conclusion which substanciates the large deck nuclear powered aircraft carrier as the most effective and efficient platform for basing our current and future tactical aircraft. While a similar number of aircraft could be distributed in smaller ships, the cost would be greater, the total effectiveness would be less, the ships would be individually less survivable and an already complicated and expensive logistics problem would be compounded.

Although the utility of a smaller, less capable carrier is recognized, construction of a small carrier is not considered in the best interest of national defense at this time. Rather, with a view toward budgetary constraints, we should proceed toward achieving the required warfighting and peacetime capability by building to 15 large deck carriers first, so as to gain the full range mission capability as soon as possible and at the least cost. Simultaneously, by augmenting our CV tactical air wings, when required, with USMC V/STOL AV-8 aircraft from existing LHA and LPH decks and from the new convertible role LHD, we will progress toward our goal of maritime superiority on the most efficient and economical course.

F/A-18

QUESTION: The Navy's F/A-18 program still seems to be beset with problems. The Marines, I am told, are fairly happy with the F/A-18, but within the Navy there has apparently been some criticism of the plane, centering around the attempt to blend two functions into one aircraft. The critics say that the A-6 is a better attack plane, and the F-14 a better fighter than the F/A-18, which attempts to be both an attack aircraft and a fighter. What is your response to the critics?

ANSWER: The F-14 with the PHOENIX missile system is the finest interceptor available. Its contribution to the defense of the carrier battle group is invaluable and cannot be matched by any other weapons system. The A-6E possesses a unique capability to conduct strikes at extended ranges from the aircraft carrier into high threat areas under extreme weather conditions. Both of these superb aircraft are optimized in capability for these respective, specialized roles. However, they are also relatively large aircraft and fewer fit within the constraints of aircraft carrier deck multiple limits.

The multi-role capability of the F/A-18 effectively doubles the fighter assets available in an air wing when fleet air defense and air superiority are primary mission requirements. When air superiority is attained, the same F/A-18 can be reconfigured with air-to-ground external stores and employed most effectively in close air support or interdiction strikes in support of Navy/Marine power projection. The flexibility, increased sortie generation rate, survivability, and superior performance of the F/A-18 strike fighter greatly enhances the overall capability of a Navy or Marine air wing.

QUESTIONS SUBMITTED BY SENATOR D'AMATO

TIME URGENT HARD TARGET KILL CAPABILITY

QUESTION: If Congress should decide to terminate the MX program, can the TRIDENT II or D-5 missile provide the same time urgent hard target kill capability?

ANSWER: Because the accuracy goals of MX and D-5 are the same at the operational ranges required, and the warheads planned for the two missiles are of similar yield, the potential hard target kill capability of the two systems is comparable. A requirement for promptness, or time urgency, can be driven by two factors: the nature of the damage requirements against the target base (i.e. destruction of missiles in their silos or destruction of mobile targets), or the necessity to employ a weapon system before it is destroyed by the enemy. Given that we attribute to the Soviets the capability to launch under attack and to reposition mobile systems, no planned U.S. strategic missile system, sea- or land-based, can effectively meet the requirements of the first definition of time urgency. The latter requirement is a factor with regard to evaluation of ICBMs, but irrelevant in the context of SLBM survivability. The response time of the D-5 system is prompt in the context of any other definition of time urgency.

Other factors besides damage expectancy and time urgency must be considered in comparing D-5/MX capabilities, however. First, the IOC of MX is 1986, while the IOC of D-5 is not until 1989. The MX is expected to be fully deployed (100 missiles) in 1989. Further, deployment of all the U.S. prompt hard-target capability in the sea-based force eases the defense problem for the Soviets by allowing their planners to concentrate on only the bomber and SLBM threats. Diversity of systems complicates enemy problems in providing an adequate defense and in structuring credible threats to U.S. systems. Additionally, diversity in our strategic forces provides a hedge against uncertainties in system performance and unanticipated changes in the threat.

TRIDENT II ACCELERATION

QUESTION: Can we accelerate the Initial Operational Capability date for TRIDENT II?

ANSWER: In the spring of 1982 the question of program acceleration was studied by the Navy Research Advisory Committee (NRAC). The committee concluded that a one year acceleration in Initial Operational Capability (IOC) was feasible, but that weapons system maturity would be somewhat less at the start of production because of the one year compression of the advanced development effort. Subsequently, it was determined that the large near term cost for the one-year acceleration could not be considered commensurate with the limited improvement in military capability which would have been achieved by acceleration of IOC. It was directed that the program continue as currently planned -- not accelerated. As the engineering development phase of the accelerated program would have had to have started in October 1982, it is no longer technically feasible to accelerate the IOC of TRIDENT II.

TRIDENT II STELLAR UPDATE

QUESTION: Why, in general terms, does the TRIDENT II missile require a midcourse guidance update?

ANSWER: The TRIDENT II missile uses an inflight stellar update to improve missile accuracy by correcting various system errors existing at the time of missile launch and certain errors which develop during the first part of missile flight.

QUESTION: How does the Navy plan to accomplish this midcourse guidance update?

ANSWER: The midcourse update for the TRIDENT II missile guidance will be functionally identical to the TRIDENT I midcourse stellar update. The missile's own guidance subsystem will contain a stellar sensing device. This sensing device will be aligned to a selected star during missile launch preparations. After the boost phase of missile flight the missile post boost vehicle will be oriented so that the stellar sensor can observe the selected star. The observed position of the star and the predicted position will then be compared and entered into the missile's computer which will generate the necessary corrections.

RETARGETING TRIDENT II

QUESTION: One of the main reasons for sustaining a land-based ICBM force lies in the ability to do prompt damage assessment to determine which of our forces have survived an enemy first strike and to retarget our surviving forces against the highest priority enemy targets. For TRIDENT II to be an adequate alternative to MX, the same processes must be accomplished. Can you explain, in general terms, how you will accomplish these tasks?

ANSWER: Because SSBNs at sea are not vulnerable to an enemy first strike, the damage assessment requirement for ICBMs is not appropriate for SLBMs. SLBMs can be expected to have survived, and, with high confidence, to have delivered their weapons to preplanned targets. Retargeting either ICBMs or SLBMs assumes the survival or reconstitution of communications capability between the NCA and surviving forces. Flexibility is a strong point of the TRIDENT II weapon system. In the event it is necessary to shift to new targets, either newly identified or determined to be undamaged, the SSBN can retarget rapidly. An on-board capability exists to construct target packages, and each SSBN has pre-stored the targets of every other SSBN. For ad-hoc coverage, the data required to be transmitted to the ship can be as little as latitude, longitude, and altitude of the individual installations, if they are not already included in the computer memory.

Blue-Green Laser

QUESTION: What advantages does blue-green laser have over very low frequency radio in communicating with submerged submarines?

ANSWER: Blue-green lasers can penetrate hundreds of feet into sea water, given the proper meteorological and hydrological conditions. Very Low Frequencies (VLF) penetrate tens of feet into sea water. Although limited blue-green laser experiments have occurred, the associated high-risk, high-cost technology cannot provide an operational capability until the late 1990's.

QUESTION: What is the current status of the Blue-Green Laser program?

ANSWER: The near term program has been refocused on small area, short-ranged, tactical application using an aircraft mounted laser, with a low power airborne laser experiment planned for FY-84. No big-dollar decisions will be made until the feasibility of space laser lifetime and power levels and power capabilities have been resolved. Current Blue-Green research indicates that system is a high-risk, high-cost technology that will not be available until the mid 1990s. Even then it will be a low data rate system because the need for covertness will force it to sweep large areas reducing the reception time available per submarine. The Defense Advanced Research Projects Agency (DARPA) has the lead in the Submarine Laser Communications System since it is in exploratory development, far term technology.

SPACE SYSTEM SURVIVABILITY

QUESTION: Considering present and prospective Soviet anti-satellite capabilities, how do you plan to insure the survivability of the space-based component of the blue-green laser system?

ANSWER: Planning is not sufficiently mature regarding the space-based component of the blue-green laser system to specify survivability measures. This system is still in exploratory development and a decision has not been made by the Navy to proceed with procurement of such a system.

QUESTION: In your view, what impact would a decision to rely upon Trident II have upon our need to undertake military operations in space?

ANSWER: There is no direct relationship between the deployment of TRIDENT II within the strategic triad and our need to undertake military operations in space. Space-based systems which provide indirect support to TRIDENT II, such as the NAVSTAR Global Positioning System (GPS) and the Military Strategic, Tactical and Relay (MILSTAR) satellite communications system have been designed for maximum survivability against known and postulated threats.

VTXTS

QUESTION: Please provide the Committee with your current estimates of the VTXTS program's: (a) research and development cost; (b) procurement cost; (c) operation and support costs over a twenty year period from ITC date; (d) research and development schedule and milestones; (e) procurement schedule and milestones; and (f) share of jobs and dollars under this program which will be spent outside the United States.

ANSWER: (a) The current estimate for RDT&E is $491.7 million; (b) for procurement $4,739.9 million; and (c) for operation and support $10,117 million--all in then year dollars.

(d) and (e) Schedule and milestones chart is provided for the record.

(f) It is estimated that approximately 35% of the total acquisition dollars will be spent outside the U.S. The share of jobs has yet to be confirmed.

QUESTION: Please provide the committee with specific explanations for each change in cost or schedule data from the base established in the information provided dated 3/4/82, as revised 3/11/82.

ANSWER: The referenced schedule and cost data dated 3/4/82, as revised 3/11/82, reflected preliminary, nonbudget quality estimates ($5.039 billion program total). While the schedule has remained virtually unchanged, subsequent budget submittals reflect increasingly detailed Navy costing and analysis, rather than programmatic changes. The Secretary of the Navy provided an updated cost and schedule profile to Senator Stevens in a June 10, 1982 letter ($5.460 billion). The President's FY-84 budget represents the current program baseline ($5.232 billion). (The $6.047 billion shown in the RDT&E Descriptive Summary was submitted in error. It is now being corrected to show the current $5.232 billion estimate.)

QUESTION: How many T-2 aircraft are presently in the Navy inventory?

ANSWER: There are 214 T-2 aircraft in the Navy inventory.

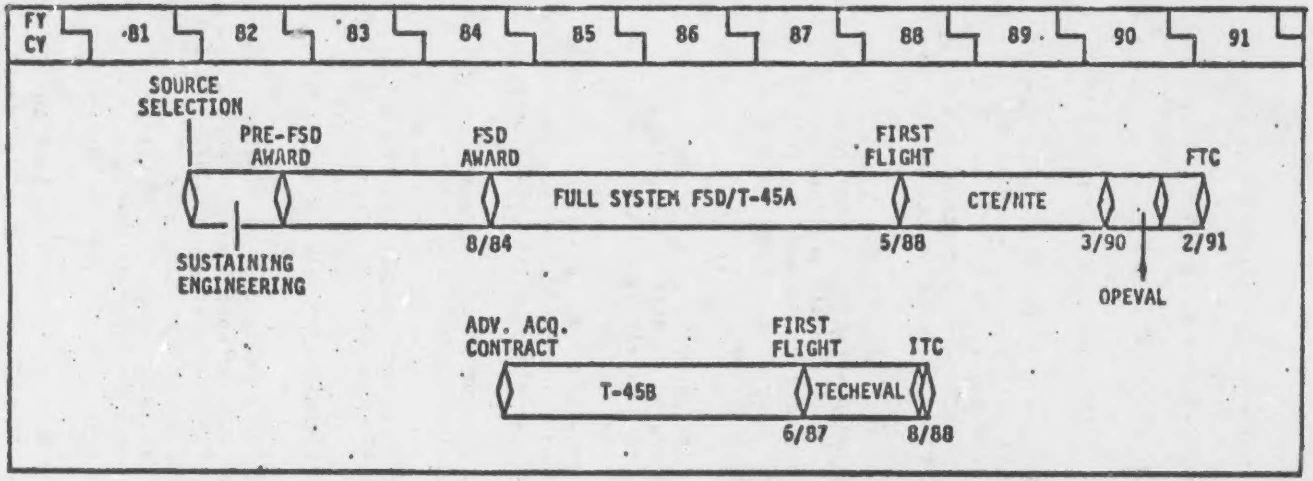
QUESTION: How many T-2 aircraft are assigned to training squadrons?

ANSWER: There are 202 T-2 aircraft assigned to undergraduate training squadrons; six assigned to fleet training squadrons for spin training and six assigned to the Naval Test Pilot School.

QUESTION: How many TA-4 aircraft are presently in the Navy inventory?

ANSWER: There are 296 TA-4 aircraft in the Navy inventory.

T-45B/A PROGRAM PLAN



									TOTAL
NUMBER OF AIRCRAFT BY PROCUREMENT YEAR	T-45A				8	24	36	48	251*
	T-45B	2	12	18	22				54
	FY CY	85	86	87	88	89	90	91	

* EXCLUDES 2 R&D A/C

QUESTION: How many TA-4 aircraft are assigned to training squadrons?

ANSWER: There are 185 TA-4 aircraft assigned to undergraduate training squadrons, 39 assigned to fleet training squadrons, 36 assigned to reserve squadrons, 22 assigned to support squadrons, and 14 assigned to RDT&E activities.

QUESTION: Please provide a detailed list of anticipated modifications required to the Adour engine in order to qualify it for carrier operations. What is your estimate of the cost of these modifications?

ANSWER: The exact modifications necessary to qualify the Adour engine for carrier operations are under study now. Therefore, no cost estimate of these modifications can be provided.

QUESTION: What is your current estimate of the percent of the Hawk aircraft by weight which will require modification to convert the aircraft to a carrier capable version?

ANSWER: Approximately forty-three percent of the T-45A, by airframe unit weight, will be different from the export Hawk.

QUESTION: What is your current estimate of the percent of the Hawk aircraft by individual part which will require modification to convert the aircraft to a carrier capable version?

ANSWER: This question cannot be answered at this early stage of program development. The Navy does not have individual part counts for either the T-45A or T-45B.

QUESTION: What is the weight of current production non-carrier capable Hawk aircraft as produced by British Aerospace?

ANSWER: The MK60 export Hawk weighs 8,035 pounds.

QUESTION: What was the weight of the version of the Hawk which was the basis for the McDonnell Douglas/British Aerospace/Sperry proposal which was selected the winner of the VTXTS pre-FSD competition?

ANSWER: The Hawk aircraft proposed during the pre-Full Scale Development competition weighed 8,950 pounds.

QUESTION: What is your current estimate of the weight of the carrier capable version of the Hawk when the first production model is delivered?

ANSWER: The T-45A is estimated to weigh 8,889 pounds.

QUESTION: What spare parts and support equipment are you planning to buy from United Kingdom suppliers to support the Field Carrier Landing Practice (FCLP) or "dry" version of the Hawk? How much will these spares and support equipment cost?

ANSWER: The Navy is reviewing several alternatives for support of the total system. Pending a decision on the support concept, no detailed identification of supply sources can be made.

QUESTION: Why has the Navy decided not to test the FCLP version to demonstrate that it meets MIL-SPEC requirements?

ANSWER: The Navy will conduct a testing program to military specifications with the exception of verifiable and relevant testing already completed by the United Kingdom.

QUESTION: Why has the Navy deleted any requirement for reliability and maintainability demonstrations, considering the significant differences between Royal Air Force and U.S. Navy maintenance procedures and operating conditions?

ANSWER: The Navy has not deleted any requirements regarding reliability and maintainability. Both areas will be fully demonstrated, and performance guarantees will be enforced.

QUESTION: Why has the Navy decided to allow contractor facilities to be used for initial evaluation and development testing rather than Navy facilities at Patuxent River Naval Air Station?

ANSWER: The initial evaluation and development testing is currently costed and planned for single siting at the Naval Air Test Center, Patuxent River, Maryland.

QUESTION: When there has never been a fully successful adaptation of an aircraft originally designed for land-based operation to carrier operation, on what basis has the Navy determined that the carrier capable version of the Hawk can be subjected to a telescoped Navy evaluation relying upon contractor data, ignoring reliability and maintainability test procedures proven accurate in other programs, and working from acceptance of British Ministry of Defense certifications of systems and characteristics which have remained unchanged from the basic Hawk, when the carrier capable version must operate under much more severe conditions?

ANSWER: There are examples of successful adaptations of aircraft originally designed for land-based operation to carrier operation. A prime example is the T-28 series of trainers. The T-28A was originally designed as a land-based USAF trainer. The carrier operable T-28C was a mainstay of naval air training for many years. We are confident that the carrier version of the Hawk will be equally successful.

QUESTION: How much will NPE and IOT&E cost for each version of the Hawk?

ANSWER: Separate NPE and IOT&E costs cannot be broken out this early in the program.

QUESTION: What is your schedule for NPE and IOT&E for each version of the Hawk?

ANSWER: The T-45B NPE is scheduled for mid-FY-87. The T-45A NPE is scheduled for late FY-88. The OPEVAL on the entire system is scheduled for FY-90.

QUESTION: Please provide a narrative description of the process by which McDonnell Douglas/British Aerospace/Sperry was selected the winner of the VTXTS competition, including the bids of the competitors, the original specifications which the competitors' proposals had to meet, the criteria under which the proposals were evaluated, and the names of the Navy officials who participated in the source selection process. This description should also include dates of critical meetings and the names of the officials present at these meetings, as well as the decisions made or recommendations issued as a result of these meetings.

ANSWER: The VTXTS program is structured as a multi-phase (Milestones 0 through 4) program pursuant to the guidelines of OMB Circular A-109. Program procurement began with award by the Naval

Air Development Center of six pre-Milestone 0 technology base contracts in FY-78 through FY-79 for analyses of undergraduate jet flight training aircraft. The purpose of these contracts was to acquire information for the development of the base upon which the Concept Exploration (Phase 0) of the project was begun. A Phase 0 Competitive Request For Quotations (RFQ) was released to industry in December 1979. The RFQ stated the need for the VTXTS and requested offerors to propose alternatives which they deemed would best accommodate the need. Nine quotations were received on 4 March 1980. On 19 August 1980, six awards were made for the Concept Exploration Phase. The contractors' final technical reports were delivered in March 1981. The results of these reports provided a basis for the definition of program alternatives.

The Phase I pre-FSD (formerly Demonstration/Validation) solicitation was a competitive Request for Proposals (RFP). The RFP was released to industry in March 1981 and required proposals to be structured in two parts: Part I required the offeror to describe his system concept and was identical to the content and formal requirements of the final technical report deliverable under the Phase 0 contract; Part II required the offeror to define his proposed approach to the pre-FSD planning requirements.

Six offers were received in response to the solicitation from the firms who had performed under Phase 0 contracts. Proposals were evaluated on the basis of technical merit, life cycle cost, and the quality of the pre-FSD effort and its associated cost. The proposal submitted by Douglas Aircraft Company based on the British Hawk was evaluated as superior to other proposed concepts. It had been contemplated to award at least two contracts for the Phase I pre-FSD effort with continuation of the competition through selection for award of the Phase II FSD effort. The pre-FSD solicitation, however, specifically reserved to the Navy the right to award a single contract.

The Source Selection Authority, Commander, Naval Air Systems Command, determined that continued direct competition through pre-Full Scale Development would cost at least $25 million with little chance of changing the results. The cost proposals of the competitors were based on proprietary information and, therefore, are not releasable for the record.

Pursuant to OMB Circular A-109, the Navy did not originally solicit on the basis of specifications. The two documents which formed the technical baseline for VTXTS were the general Constraints and Guidelines and the Naval Air Training Command's Terminal Learning Objectives

The names of the officials who participated in the source selection process and the date of the meeting are as follows: Phase I Source Selection Advisory Council (SSAC) meeting held at Naval Air Systems Command on 13 November 1982.

Chairman, Source Selection Advisory Council:
RADM J. B. Wilkinson (voting)
Members, Source Selection Advisory Council: (voting)
RADM N. P. Ferraro
RADM L. R. Sarozdy
RADM R. O. Johnson
CAPT W. J. Hickman
Mr. F. A. Phelps
RADM K. L. Shugart
RADM E. H. Martin
CAPT J. C. Presley
RADM J. S. Sansone

Project Manager: CAPT B. F. Short (nonvoting)
Executive Secretary: LCDR G. E. Hendricks (nonvoting)
Advisors: Mr. J. H. Lannen (nonvoting)
Mr. W. R. Hunt (nonvoting)
Air Force Observer: BGEN W. M. Charles (nonvoting)

Following presentation by the Evaluation Board to the SSAC, the SSAC recommended to the source selection authority that a contract(s) to continue development of VTXTS be awarded to McDonnell Douglas/BAE or both McDonnell Douglas/BAE and the number two competitor team.

QUESTION: Who was the final source selection authority in the VTXTS competition?

ANSWER: The Commander, Naval Air Systems Command was the final source selection authority.

QUESTION: What role did the Secretary of the Navy play in the source selection process?

ANSWER: The Secretary of the Navy had review authority of the source selection plan as submitted by the source selection authority.

QUESTION: Was the selection of the winning contractor in the VTXTS competition affected in any way by any agreement with the United Kingdom, formal or informal?

ANSWER: No. The VTXTS competition was open and in accordance with the DOD acquisition process. The principal selection criteria against which the systems were evaluated were: technical merit of the proposed baseline system concept; baseline system costs; quality of the proposed pre-Full Scale Development effort; and cost of the proposed pre-Full Scale Development effort. The McDonnell Douglas system based on the British Hawk aircraft was evaluated as being technically superior to the other proposed systems and was assessed as having the lowest projected life cycle cost.

QUESTION: Did the Department of Defense or the Department of the Navy receive any communications from or meet with any representatives of the government of the United Kingdom concerning the VTXTS competition, defense procurement offset agreements involving VTXTS, or discussions involving the Rolls Royce Adour engine?

ANSWER: To the best of our knowledge, there were no such meetings or communications between the Navy and the government of the United Kingdom.

QUESTION: What is the total value of the Hawk simulator program?

ANSWER: The total value of the Hawk simulator program is estimated to be $599.1 million (then year dollars).

QUESTION: What percentage of the simulator work will be done by Rediffusion Simulation Ltd. and where will that work be done?

ANSWER: No participation by Rediffusion is planned at this time.

QUESTION: What will be the dollar value of the simulator work to be done by Rediffusion Simulation Ltd.?

ANSWER: No participation by Rediffusion is planned at this time.

MEDIUM DEPTH MINE

QUESTION: What are the Navy's plans for the Medium Depth Mine program?

ANSWER: As of this time, the program has been terminated. The value of the Navy family of mines is the contribution to the Navy's sea control mission. The impact of MDM termination on the Navy's sea control mission has been minimized by planning minefields so that the areas that would have been covered by MDMs are covered by ships, aircraft and other weapons.

SAG HOMEPORTING - NORTHEAST

QUESTION: The Navy plans to station a Surface Action Group (SAG) in the northeastern part of the country. How many ships of what type will be included in this SAG?

ANSWER: The Surface Action Group (SAG) envisioned for the Northeast would be composed of one battleship, one cruiser, one destroyer and two guided missile destroyers.

QUESTION: What is the Navy's timetable for deciding where the SAG will be based?

ANSWER: Discussions are underway with local officials from Boston, New York and the Narragansett Bay area, concerning the Navy's requirements to support the SAG. Proposals from the cities are expected this spring, and a recommendation will be presented to the Secretary of the Navy later this year.

QUESTION: Who will make the decision concerning where the SAG will be based?

ANSWER: The Chief of Naval Operations with the concurrence of the Secretary of the Navy.

QUESTION: Who will review the proposals submitted by the competing cities and recommend to the selecting officer which city should win?

ANSWER: A study team has been formed composed of representatives from the Commander in Chief, Atlantic Fleet; Office of the Chief of Naval Operations; Northern Division, Naval Facilities Engineering Command, and local commands cognizant of the three cities. The team will evaluate proposals and submit a recommendation to CINCLANTFLT, who in turn will provide his recommendation to the CNO. CNO will obtain SECNAV approval for selection of the preferred alternative.

QUESTION: What are the criteria the Navy will use to evaluate the SAG proposals and what weight will the Navy assign to the individual criteria?

ANSWER: Evaluation of proposals will consider all available information including cost to the Navy, availability of essential primary support facilities (piers, utilities, family and unaccompanied personnel housing, maintenance & administrative space), secondary support facilities, and other information indicating the suitability and desirability of each location as a potential SAG homeport. Numerical weights have not been assigned to criteria elements at this time.

F-14

QUESTION: What plans does the Navy have to make product improvements to the F-14?

ANSWER: To meet the threat through the years 2000-2005, an F-14 upgrade program will be needed. Naval Air Systems Command has been directed to examine the type of management approach required and to develop the most cost-effective options for block upgrades to the F-14. The F-14 upgrade program will address three major areas:

(1) Alternate Engine - A dependable engine with increased reliability and maintainability, decreased operating cost, and free of combat limiting throttle restrictions is desired.

(2) Avionics Integration Program - To provide the required capabilities to counter the Soviet threat through the 1990's, we need to incorporate new programs such as JTIDS, ASPJ and AMRAAM. These programs use digital avionics which are not compatible with the 1960's analog avionics currently in the F-14. An avionics integration program that will take advantage of advances in digital technology to improve reliability and decrease ownership costs and provide for accommodation of future programs is required.

(3) Radar Improvements - The ever-increasing ECM threat necessitates improved radar ECCM capabilities. Several hardware and software modifications are being reviewed. Trade-offs between increased capabilities and cost thereof need to be finalized.

Preliminary investigation indicates a new engine could be incorporated into production aircraft about FY-87, the avionics and radar upgrades about FY-89.

In the FY-84 budget, we are requesting $42.4 million to support the avionics and radar upgrade programs. No funding is requested for an engine program. We will be reviewing our options this year and expect to present a complete F-14 upgrade program to the Congress next January.

QUESTION: Does the Navy have any plans to install a new engine in new production F-14's at any time in the future?

ANSWER: The TF30-P-414A improves durability and doubles depot repair interval; however, operability problems have not been fixed. The TF-30 compressor-stalls routinely and unpredictably, resulting in throttle restrictions and flight envelope restrictions. Engine upgrade options are being considered as part of the FY-85 budget formulation process.

A-6

QUESTION: Does the Navy have any plans to install a new engine in new production A-6's at any time in the future?

ANSWER: Engine requirements for the A-6 upgrade are still under investigation. Any significant increase in aircraft gross weight will most probably result in the installation of a higher thrust engine.

QUESTION: Does the Navy have any plans to make product improvements in the A-6?

ANSWER: The Navy has decided to proceed with a configuration upgrade of the A-6 vice development of a new replacement aircraft. Specific configuration changes are still under investigation.

F/A-18

QUESTION: What will be the IOC of the FLIR pod the Navy is developing for the F/A-18? What will the unit cost of this FLIR pod be?

ANSWER: The IOC of the FLIR pod will be fiscal year 1984. The unit cost for the FLIR pods procured in FY-84 is estimated to be $1.66 million.

QUESTION: Compare the capabilities of the F/A-18 FLIR pod with the TRAM system as presently installed in operational A-6E's. What differences are there in system capabilities?

ANSWER: The A-6E TRAM FLIR/Laser/Spot Locator can detect, track (by Bombardier/Navigator) and execute automatic weapon deliveries without use of active radar. The F/A-18 FLIR pod with the Laser Target Designator/Ranger (LTD/R) incorporated will provide the F/A-18 with a comparable capability.

The A-6E TRAM presently can designate for other aircraft delivering smart bombs and for self-delivery of same. The F/A-18, with the separate Laser Spot Tracker (LST) pod, can deliver smart weapons using external designator.

A capabilities comparison of the F/A-18 FLIR pod and the A-6E TRAM system is provided for the record:

CAPABILITIES COMPARISON OF F/A-18 FLIR POD AND A-6E TRAM

	AUTONOMOUS TARGET ALL WEAPONS (RANGE AZIMUTH/ELEVATION TO COMPUTER)	LASER WEAPONS DELIVERY		PASSIVE TARGET DETECT/CLASS/ID		AUTO TARGETING AND TRACKING	UNLIMITED MANEUVER DURING DELIVERY AND WHILE TRACKING
		SELF- DESIGN	EXT.- DESIGN	LIGHT FOG /HAZE	MED FOG/HAZE		
A-6E TRAM AN/AAS-33A	YES	YES	YES	YES	NO	Note (4) NO	YES
F/A-18 FLIR POD	Note (1) NO	Note (2) NO	YES	YES	Note (3) YES	Note 4 YES	Note (5) NO

Notes:

(1) F/A-18 has azimuth/elevation through FLIR; no range until laser incorporated.
(2) F/A-18 has azimuth/elevation through LST; no range until laser incorporated.
(3) F/A-18 has better sensitivity and more detectors; A-6E TRAM has better resolution but fewer detectors.
(4) A-6E TRAM second crewman provides manual/continuous target tracking.
(5) F/A-18 pod placement restricts target approach and maneuvers post-launch.

F/A-18

QUESTION: In your view, will an F/A-18 with a FLIR pod have comparable night/adverse weather capabilities to those of the TRAM-equipped A-6E?

ANSWER: The F/A-18 has better sensitivity and more detectors; the A-6E TRAM has better resolution but fewer detectors. So, given the same marginal atmospheric conditions, the F/A-18 detects the target sooner; the A-6E TRAM classifies and identifies targets sooner, especially with dedicated second crewman attention to display.

The A-6E TRAM utilizes manual target tracking by the Bombardier/Navigator; the F/A-18 has an auto tracker incorporated.

The integration of a nose-turret in the A-6E TRAM allows full lower-hemisphere target visibility on approach and during post-launch maneuvers.

Location of the F/A-18 FLIR pod in the left SPARROW fuselage station permits supersonic performance. There is a minor line-of-sight restriction due to fuselage shadowing. From a tactical standpoint, the FLIR/LST and TRAM are comparable systems with only minor capability differences. The two-man crew enhances the ability of the A-6E to perform strike missions under certain conditions.

A-6

QUESTION: What are the range/payload differences between the F/A-18 and the A-6E?

ANSWER: Briefly stated, the F/A-18 has about two thirds of the range/payload capability of the A-6E, using standard combat loads.

LANDING CRAFT AIR CUSHION (LCAC) PROGRAM

QUESTION: What are your plans for the LCAC landing craft program?

ANSWER: Lead production contracts have been signed with Bell Aerospace Textron in New Orleans for three craft in February and three more craft in October 1982. We plan on contracting for an additional six craft in early FY-84 and going to 12 craft per year starting in FY-85. The ultimate buy will be determined at that time. Sixty craft are currently in the FYDP. IOC is planned for FY-86 on the West Coast and FY-87 on the East Coast. The Navy's preferred support bases will be located at Camp Pendleton, California and Little Creek, Virginia.

AIR-LAND BATTLE DOCTRINE

QUESTION: The Air Force and the Army have adopted a combat doctrine called "Air-Land Battle" which these services are using not only as the basis for training combat units, but are also using it to guide their research and development programs to produce systems to support the concept. Does the Navy have a similar combat doctrine?

ANSWER: The Navy does not utilize a single, published combat doctrine for its air-land-sea battle. However, our developed Maritime Strategy provides a common strategic framework against which research and development and other programming decisions can be measured. Using this document as a guideline, specific naval warfare areas (such as Anti-Air Warfare (AAW), Anti-Submarine Warfare (ASW), Anti-Surface Warfare (ASUW), Electronic Warfare (EW), etc.) produce annual appraisals as part of our Planning, Programming, Budgeting (POM) cycle. These annual appraisals provide a realistic view of present and future fundamental principles by which the Navy guides its actions in support of planned objectives.

Furthermore, in support of these R&D programs are warfare area master plans, the Defense Guidance, and numerous long range studies/analyses which provide necessary guidance for initiatives and decisions relating to development, procurement, new-construction, training, and other primary supporting programs. They are sufficiently authoritative in direction, but require judgement in application. In summary, all of these provide the needed long range direction and yet give the Navy the flexibility to respond to an everchanging threat and a possible unexpected change in our adversaries.

QUESTION: If so, what is the doctrine called?

ANSWER: The Navy has developed a maritime strategy concept which describes its combined naval air-land-sea capabilites.

QUESTION: Does the Navy also use its combat doctrine to drive its research and development?

ANSWER: The Navy uses many sources to drive its research and development. The Navy's future battle plans remain realistic, multi-dimensional, and flexible in a global concept. These plans, written with careful analysis of current and future threat postures that may be arrayed against us, form the basis of weapons systems requirements which in turn provide impetus to our research and development programs.

QUESTIONS SUBMITTED BY SENATOR STENNIS

DDG 51

QUESTION: Admiral Watkins, I would like your comments on the planned capability for the DDG 51 class destroyer. How do you feel that this new class destroyer will augment the current air defense and anti-submarine warfare capability of the fleet?

ANSWER: The principal reason for DDG 51 is to distribute offensive and defensive firepower both within individual fleet task groups and around the globe. It will augment CG 47 and DD 963 ships both in air defense and submarine defense. The quality of these capabilities in DDG 51 is the same as in those ships; however, the capabilities are not as concentrated in a quantitative sense.

QUESTION: There have been some comments that the projected cost of the DDG 51 is too high for the capability it will provide. Yet it is my understanding that this ship will be mid-way between the capability of the FFG 7 frigates and the CG 47 AEGIS cruisers and the projected cost is approximately mid-range between the two also. Would you comment on this?

ANSWER: While the cost of an average DDG 51 is about mid-way between that of an FFG 7 and CG 47, its capability is not. DDG 51's capability, both offensive and defensive, is much greater and ten years more advanced than that in FFG 7.

QUESTION: Is there anything else on the drawing boards that could provide the capability offered by the DDG 51 in the timeframe it is to be available?

ANSWER: Yes, CG 47's could but at a significant increase in cost.

QUESTION: A request of $99 million is included in the President's Budget for the DDG 51 ARLEIGH BURKE. Is the program on schedule and when is the lead ship award planned?

ANSWER: The program is on schedule with first ship contract award planned for the second quarter, FY-1985.

AV-8B

QUESTION: General Barrow, this year's request includes funds for 32 AV-8B HARRIER V/STOL aircraft. This is the third year buy for this aircraft. How is your operational testing on this aircraft coming along?

ANSWER: The AV-8B is completing the first year of a two year Full Scale Development (FSD) program. Four FSD AV-8B and one YAV-8B prototype aircraft have completed over 700 flights and completed nearly seventy percent of the FSD effort. To date no remarkable deficiencies or "high risk" technical problems have been identified, but work to improve the basic aircraft and system continues at a rigorous pace. A majority of the discrepancies identified during preliminary technical evaluations and the Initial Operational evaluation conducted last fall have already been corrected during the evolution of an immature system into a production quality product.

Among the corrections already effected:

- Development of mature weapons system software
- Installation of an oral stall warning system
- Revision of Head Display weapons aiming and instrument flight symbology and mechanization
- Rescheduling "auto flap" and "aileron droop" for improved handling
- Reduction of aerodynamic drag
- Improved mechanization of Inertial Navigation alignment sequence

Highlights of the development program include:

- Assessment of the integrated navigation and attack system as a significant improvement over existing Marine Corps light attack aircraft
- Demonstration of consistent weapons accuracy using "system bombing"
- Demonstration that... "flying qualities and inherent stability... were vastly superior..." to previous Harrier models
- Range and payload of the AV-8B are more than double the capability of the AV-8A

The major issue awaiting resolution concerns basic aircraft/

engine performance. Although the wing and airframe combination are very maneuverable, the excess thrust available at high speed is less than predicted in early studies and trials. Although it is well understood that the full production standard engine will not be available until the fall of 1984, current evaluations are limited to an interim version of the Pegasus. As a result, the FSD aircraft were judged deficient in performance during trials. To realize the aircraft's full potential within the context of the current program two parallel efforts have been initiated. First the airframe contractor has initiated an innovative effort to reduce drag, both airframe and thrust-related interference. Secondly, the power plant is undergoing intense study and modification to further improve performance without sacrificing reliability. Preliminary indications suggest that a significant improvement in Maximum Thrust output can be effected in the interim engine by marginally increasing the jet pipe temperature limitation, without adversely affecting engine life. The F-402-RR-406 engine, developed by Rolls Royce as part of the AV-8B/6R-5 Harrier II collaborative effort will attain these same thrust levels and provide improved performance at significantly lower temperatures. As a consequence the -406 equipped AV-8B will be able to meet or exceed all performance specifications, and due to its advanced technology require fewer inspections and less maintenance.

As FSD flying continues, changes are identified, improvements are rapidly incorporated in the production line so that the first aircraft delivered to the Marine Corps will be a fully combat capable machine.

QUESTION: Would you comment on your assessment of the British experience with this aircraft in the Falkland conflict?

ANSWER: The Falkland Islands' experience once again highlighted the need for a flexible weapons system capable of rapid deployment to inhospitable regions of the world. The Harriers of the Royal Navy and Royal Air Force deployed on short notice, sustained a high tempo of combat operations and prevailed despite the appalling sea and weather conditions encountered in the South Atlantic. The aircraft was absolutely vital to the British effort. The Marine Corps requirement to transition to the AV-8B, a new, more capable light attack V/STOL aircraft, was positively endorsed by the successful trial by combat of the British Harrier force.

QUESTION: Would you also comment on how the close air support mission for the Marines in amphibious operations will be enhanced when these aircraft become available in the fleet?

ANSWER: The close air support mission for the Marine Corps is the primary mission of our eight light attack squadrons. Composed of A-4Ms and AV-8A/Cs, these squadrons will be re-equipped with the AV-8B providing for early deployment ashore and improved weapons effectiveness. The flexibility of V/STOL basing is a significant advantage over the CTOL A-4M, enabling Force Commanders greater planning flexibility and providing quicker response to requests for support. The AV-8B is superior to the AV-8A/C in range, payload, reliability and weapons effectiveness. The net result of the transition to an all AV-8B light attack force will be increased combat effectiveness of the FMF.

QUESTION: Admiral Watkins, on May 19 of last year during hearings before the Senate Armed Services Committee on the FY 1983 Defense Authorization Bill, I questioned you regarding U.S. military power. There was no doubt in your mind at this time that you would not for one instance trade U.S. military forces--you referred to them as the American "blue chips of superiority"--today for those of the Russians, or anybody else.

There was no doubt in your mind when in response to the question, "What are the Russians afraid of?", you said, and I quote: "Our superior tactical air at sea is number one . . . . Our superior SSN submarines are better--probably 5 to 8 years in technology . . . . We have a superior cruise missile which the Soviets cannot match . . . . Weapons systems individually in my judgement, are superior to the individual weapons systems in Soviet combatants."

Now, almost one year later, Admiral Watkins, I would like to know if your response would be any different to the same question--What are the Russians afraid of with regard to the United States Navy?

ANSWER: My answer would be much the same this year. Our carrier battle groups continue to give us tactical air superiority at sea. The Soviets won't begin to attain similar capabilities until they commission their first large deck carrier in about 1990. Our SSNs and individual weapons systems continue, in my judgment, to be superior. I would amend somewhat my statement about Soviet inability to match our cruise missiles. Within the past year we have learned more about a Soviet program to develop a sea-launched, land attack cruise missile similar to our TOMAHAWK and expected to be operational this year. It's still too early in the life of both missiles to compare the results of the Soviet effort to our TOMAHAWK program, however.

QUESTION: General Barrow, would you please comment on the same question with regard to the United States Marine Corps?

Answer: The Soviets' concern relative to the Marine Corps is manifold. From a strategic perspective, I would suggest that the ubiquitous nature of the Marine Corps' amphibious capability is most worrisome to the Soviets--and well it should be. The flexibility inherent with amphibious task forces, combined with the potent firepower found in our carrier battle and surface action groups, will always give our adversaries reason for pause. The Navy/Marine Corps Team's capability for power projection--to establish and defend advanced naval bases, to seize strategic choke points, or to establish a lodgement through forcible entry--is very perplexing to those who would create mischief. When one considers the vast littorals the Soviets would be compelled to defend in the event of general war, it is evident that our capacity to strike at will, when and where we choose, serves as a significant device for strategic distraction which can divert, fragment, and constrain major enemy forces.

From the tactical viewpoint, the significant combat capability--firepower, mobility, command and control--represented in every Marine Air Ground Task Force must also give our adversaries reason for concern. Moreover, the total combined arms concept to which the Marine Corps subscribes--harmoniously integrating air, ground and naval weapons systems into a cohesive strike force--is unique among the armed forces of the world and a considerable force to be reckoned with.

Finally, there are the unquantifiable qualities that set Marines apart--espirit and the devoted determination to get the job done. The Soviets are well aware of that indomitable spirit and determination and, I suspect, it is that which they fear most.

AIRCRAFT MODERNIZATION

QUESTION: Admiral, I believe you have testified that approximately 330 aircraft per year are required to maintain the age of the manned aviation fleet. Yet, in the fiscal year 1984 request, only 281 aircraft are planned. What does this do to your planned modernization efforts when most of the increase is not for Navy combat aircraft?

ANSWER: While the 281 aircraft requested provide important increases in capability, we will still fall short of the total number of aircraft required to maintain the age of the total inventory, which will continue to increase. Approximately 150 of the 330 total aircraft are required to maintain the average age of the TACAIR community. The Fiscal Year 1984 request includes 152 fighter and attack aircraft, which will allow us to continue the modernization of this critical force element.

AIRCRAFT PROCUREMENT

QUESTION: Does the requested fiscal year 1984 aircraft buy support your plan to increase to 15 deployable carriers and 14 active duty wings?

ANSWER: Yes, the Fiscal Year 1984 FYDP will support the formation of 14 active air wings. With the delivery of CVN-73, our carrier inventory would consist of 15 deployable carriers.

SHIPBUILDING PROGRAM

QUESTION: The budget for Fiscal Year 1984 includes new construction funds for only 17 ships, of which only 9 can truely be classified as fighting ships. Is it possible with limited new construction that the Navy will ever be able to achieve the desired 600 ship force level?

ANSWER: Based on current plans, Navy will achieve the 600 ship force level by the end of FY 1989. The FY 1984 request continues Navy's balanced growth in all classes of naval shipping, combatants, amphibious, mine warfare and fleet support and auxiliaries. Approval of the FY 1984 program as submitted will provide another positive signal that the United States intends to meet our stated objective of 600 ships and sustain our role of maritime superiority.

QUESTION: I note the Fiscal Year 1984 President's budget does not include a request for the FFG guided missile frigate. This class ship has been in the program for a number of years, and it is my understanding it has been very successful in performing its mission in the Fleet. What are your plans for the future regarding this ship?

ANSWER: The FFG 7 procurement program completed with the FY 1983 appropriated ships. Our current frigate force coupled with the FFG 7 class ships under contract and in construction will satisfy our force level objectives for frigates. At this time, we have no plans for additional procurement of FFG 7 class ships.

CARRIER FUNDING/DEPLOYMENT

QUESTION: In the five-year plan supporting the fiscal year 1984 defense budget, there was an additional nuclear carrier programmed in fiscal year 1988. It is my understanding that this has now been deleted. Why is this?

ANSWER: The five-year shipbuilding plan that was submitted in support of the FY-84 defense budget does include a CVN in FY-88. This ship was included in the plan in the event the second carrier was not appropriated in FY-83. Funding last year of two Nimitz class nuclear powered aircraft carriers will permit Navy to achieve its goal of 15 CV/CVN by the end of calendar year 1989. Thus, FY-88 CVN will not be included in the FY-85 shipbuilding plan.

QUESTION: Will this affect your plans to deploy a 15 carrier battle group?

ANSWER: The above action will not affect our plans to achieve 15 deployable carriers.

RAPID DEPLOYMENT FORCE

QUESTION: Would you discuss our sealift mobility plan for supplying the Rapid Deployment Force. Where are the prepositioned ships located and where will the fast resupply ships be berthed? Will both these ships be loaded with equipment--ready to move if the requirement dictates?

ANSWER: Our sealift mobility plan is not specifically for supplying the Rapid Deployment Force, now U. S. Central Command. While many of the programs and initiatives give priority to the Central Command, they give us the flexibility to respond to a number of contingencies. Our major programs include the Near Term Pre-positioning Force and the Maritime Pre-positioning Force (TAKX) which supports the Marine Corps mission including employment by Central Command. In another of our programs, we are modifying eight SL-7s (TAKRX) for fast surge capability for unit equipment, including rotary wing aircraft and vehicular cargo to support Army lift requirements. Additional programs include the increase of the Ready Reserve Force to seventy-seven (77) ships and an acquisition program for two hospital ships (TAHX). Complementary to the mobility programs are the support systems which provide the capability to discharge cargo and to enhance the military utility of commercial ships. Programs planned include causeway sections, auxiliary crane ships, LASH lift beams, sliding padeyes for underway replenishment, flat-racks and SEA SHEDS, bulk liquid discharge systems and elevated causeways. These are necessary accessories to the total sealift plan.

Seventeen (17) pre-positioning ships are currently located at Diego Garcia and a single depot ship in the Mediterranean. These ships are loaded with unit equipment and a variety of material and supplies to support all Services and include POL and water. The fast logistics ships or SL-7, when converted, will be berthed in the United States to provide fast sealift contingency deployment. The ships will not be pre-loaded but will be berthed at appropriate locations near units which would deploy their equipment and supplies aboard the ships. Location of lay-berthing is currently under study for the SL-7s.

Planning is currently underway to formulate specific basing plans for TAKX ships. Multi-theater positioning appears reasonable given the global responsibilities of the fleets. One group will replace a portion of the Near Term Pre-positioning Force at Diego Garcia currently carrying equipment and supplies of the Marine Amphibious Brigade.

DEPOT OPERATIONS IMPROVEMENT PROGRAM

QUESTION: The Navy depot operations improvement program was established in 1981 to ensure increased emphasis on ship overhaul performance. There are two stated goals. In the short-term to complete quality overhauls on time and within cost estimates and in the longer term to complete quality overhauls faster and at reduced costs. How do you feel about the performance of the program thus far in meeting your stated goals?

ANSWER: The Navy is making excellent progress toward meeting its stated goals. For example, in the private sector at the end of FY 82, we had reached the point where we completed surface ships, on the average of only two days late and within our costs projected at the start of overhaul. This is a substantial improvement over the situation that existed two years earlier.

In naval shipyards which handle our more technically complex overhauls, we have recently undertaken a number of new actions to further improve their schedule and cost performance. These actions are now starting to produce measurable results.

Overall, progress toward achieving our overhaul performance goals is on track. With some exceptions, ships are regularly being completed on time and within projected end costs.

QUESTION: What is the current structure of the program regarding the number of elements involved?

ANSWER: The DOIP program has been expanded in scope to include surface ships overhauled in the public sector, and more recently to include nuclear surface ships and submarines. This action has resulted in several new initiatives being undertaken. As a consequence of these actions, the program administration is being restructured to focus command emphasis on 32 major initiatives.

QUESTION: What do you estimate the improvement program is costing on an annual basis?

ANSWER: The thrust of the DOIP is to strengthen and streamline existing policies and procedures and instill a greater degree of discipline in the execution of our policies and procedures. Except to establish a small office to manage the overall effort, these improvements are being carried out through the existing management and ongoing programs. The basic program is being pursued within existing funding.

QUESTION: Do you feel the program is being adequately funded?
ANSWER: Yes, the Navy has carefully reviewed all facets of the program and has ensured that an adequate amount of resources have been applied to the areas which will bring the greatest improvements and payback.

ADVERSARY AIRCRAFT

QUESTION: Tell me about the request for the adversary aircraft to simulate Soviet tactical fighters. What are we using for this purpose now?
ANSWER: The adversary aircraft program is a combat-proven program which provides air combat maneuvering superiority to Navy/Marine fighter aircrews through training against simulated threat aircraft and exposure to Soviet mind-set tactics. Currently, the Navy is utilizing twelve F-5E/F aircraft to simulate supersonic threat aircraft.

QUESTION: What aircraft are potential candidates for this competitive procurement?
ANSWER: Primary candidate aircraft include the Northrop F-20 and the General Dynamics F-16/J79 aircraft.

QUESTION: What about the FEWSG aircraft (KC-135 type) for use as an electronic equipped aircraft to simulate enemy threats. How is this mission being performed at present?

ANSWER: The mission is currently performed by two electronic warfare configured NKC-135A aircraft. These aircraft are dedicated to the FEWSG mission under the permanent operational control of COMFEWSG and are maintained and operated by specially cleared and selected crews under a contract support agreement. Aircraft use varies from single unit training to major U.S. naval force operations in a variety of exercise scenarios (i.e., war-at-sea, battle group pre-deployment workup and open ocean transit, amphibious landing, mobile sea range, open ocean missile exercises, etc.) Operations extend from U.S. contiguous waters to the Mid-and Western Pacific, Mediterannean, Puerto Rico and Northern Europe.
Even though utilized to the maximum extent practicable, requirements are approximately twice what is scheduled.

QUESTION: Has the possiblility been considered to procure a used commercial 707 aircraft to be configured for this purpose?

ANSWER: Yes, present plans are to procure a used commercial 707-size aircraft outfitted with an updated jammer, receiver, and controller suite. Flyaway cost is estimated to be $26.4 million (APN-4 funds) plus $1 million for spares. The aircraft is expected to have initial operational capability by August 1986.

TAV-8B

QUESTION: I understand a delay in initiating the program start for the TAV-8B Harrier Trainer is under consideration. The AV-8A Trainer was delivered late in the training program and you will recall that the accident rate was very high. Funds were included in the Fiscal Year 1983 bill to initiate this program. Is it your recommendation that this program be undertaken as a priority basis?

ANSWER: The Marine Corps requirement for a two seat trainer version of the AV-8B remains unchanged. With a start in FY-83, the contractor can meet an Initial Operating Capability of FY-86, just as V/STOL training and transition demands rise sharply. The positive impact on operating efficiency and program safety of two seat trainers is certainly not unique to the Harrier community and has been clearly endorsed by the request for R&D funds contained in the FY-84 budget. The program is very important to the Marine Corps and merits priority consideration.

AV-8B

QUESTION: I believe that the AV-8B Harrier is supposed to be a much safer aircraft due to increased reliability, ease of maintenance, aerodynamic changes, and improved visibility. Is this your understanding also?

ANSWER: Safety was a primary consideration in the AV-8B design. Operational experience accumulated by the Marine Corps and Royal Air Force since 1971 clearly defined the critical phases of flight and functional reliability that were significant to the AV-8. The aerodynamic features incorporated in the AV-8B provide improved lift and greater stability; in addition reaction control power for V/STOL flight was increased, particularly in roll, providing a significantly enhanced safety margin. The Stability Augmentation Attitude Hold System (SAAHS) automatically stabilizes the aircraft in the hover and reduces pilot workload in conventional flight. Subjective assessment by qualified test pilots estimate a 65 percent reduction in pilot workload in V/STOL. The raised cockpit provides improved downward and rear visibility. Modern state-of-the-art instruments, displays and controls provide more information to the pilot in every mode of flight and are far more reliable than the equipment they replace. The Pegasus 11 engine, a remarkably responsive powerplant, has been redesigned to provide improved reliability and reduced maintenance man hours. In every aspect the airframe and engine combination has been improved to provide the fleet with an effective weapons system that is safe to fly.

SOVIET AIRCRAFT CARRIER PROGRAM

QUESTION: Mr. Secretary, you have been quoted as saying that "evidence continues to mount" that the Soviets are readying a new, large conventional carrier program. Would you comment a bit more on why the Soviets would move in this direction.

ANSWER: Large deck aircraft carriers will help the Soviet Navy to do two things currently beyond its capabilities -- control sea areas outside the range of land-based aircraft and project power ashore effectively against significant opposition in distant areas. In particular, carrier-based aircraft can provide the type of area air defense capability necessary to allow Soviet surface groups to operate effectively in open ocean areas such as the Southern Norwegian Sea, the North Atlantic and Central Pacific areas where we currently would not expect them to venture at the outset of war.

ANTISUBMARINE WARFARE

QUESTION: I would like your opinion of where we stand on Antisubmarine Warfare (ASW). Do we have a real problem?

ANSWER: At present our ASW forces have a technological edge over the Soviets; however, we have deficiencies with regard to our ability to carry out sustained ASW operations. As for the future, there is serious question concerning our ability to maintain even a technological advantage. The following specifics pertain.

Previously, the Soviet emphasis on numbers of submarines at the expense of acoustic detectability has given our ASW forces an advantage. With this advantage, we have been able to work the ASW problem through application of a wide range of forces from long distance surveillance through close-in ships, aircraft, sensors and weapons. [Deleted.] Our quiet SSNs remain a most capable ASW system, both in forward area independent operations and in support of Battle Groups. Within our Air ASW arm Maritime Patrol Aircraft (MPA) provide a good, long range capability. Closer in, our S-3s have shown improved material readiness and are complemented by helicopter forces to provide a credible close-in quick response. The surface capability is improving significantly with the outfitting of tactical towed array systems and LAMPS helicopters. [Deleted.] This shortage, which has been worsening over the past decade, is being addressed but requires consistent funding over the next several years.

Our major ASW concern is the emerging submarine threat which follows from Soviet recognition of the need for noise reduction as well as being faster and deeper diving. [Deleted] [deleted]. The survivability of our CVBGs, amphibious and resupply forces is at stake. We have a modernization program to address the Soviet threat but it can only be achieved with a revitalized commitment to include:

- Continuing an undersea surveillance program capable of detecting the next generation Soviet submarine in key areas.
- Procurement, at sufficient levels, of new systems such as SQR-19 towed array, LAMPS MK III and advanced acoustic processors.
- Upgrade of current systems such as the MK-48 torpedo (ADCAP), S-3B and P-3C.
- Development of new systems such as ALWT, ERAPS, and SH-60F.

In summary, with improvement in sustainability, I would evaluate our current ASW capability as adequate. However, as I have pointed out, we need your strong support to face the much tougher submarine threat which is now being introduced by the Soviet Union.

QUESTION: The Soviet Navy is certainly coming forward with increasing capability such as the OSCAR, the TYPHOON and the ALPHA. How concerned are you about the declining SUBROC assets and the potential gap in coverage until the ASW Standoff Weapon is available?

ANSWER: [Deleted.]

SUBROC phaseout will take place gradually over an extended period [deleted]. The follow-on submarine launched ASW weapon, the ASW Standoff Weapon, will enter the fleet [deleted] before SUBROC capability is removed.

ALWT

QUESTION: Along these same lines, what is the capability of the Advanced Lightweight Torpedo (ALWT) against this threat?

ANSWER: [Deleted.]

QUESTION: Would you tell us the current status of the ALWT program.

ANSWER: The ALWT is continuing in its demonstration and validation phase which will complete in July 1983. The technical problems in the stored chemical energy propulsion system and in the sonar which caused delays in the demonstration and validation testing have been solved. The first successful run of the 100S series torpedo, incorporating the propulsion and guidance system, has been achieved. The torpedo ran until fuel exhaustion, achieved full power, and the guidance system and sonar executed all of their functions. The reports required to be submitted to Congress by June 30, 1983, are in preparation. ALWT will transition to engineering development in August 1983.

LAMPS MK III

QUESTION: The FFG 7 class frigate used in convoy protection is to be equipped with the LAMPS MK III helicopter and the AN/SQR-19 Tactical Towed Array Sonar (TACTAS). The installation schedules for the LAMPS and the AN/SQR-19 appear to be inconsistent. For example, the FFG 7 frigates from the FY 1979 funded program are scheduled for LAMPS installation in fiscal year 1984 yet the first opportunity for SQR-19 installation is FY 1986. Why is this? Wouldn't it better serve the Navy's purpose and save costs by installation of both systems at the same time?

ANSWER: All FFG 7 class frigates from the FY 1979 funded program include incorporation of the LAMPS MK III capability. It is much more cost effective to install the capability during construction rather than to backfit that capability. LAMPS MK III completed its development cycle and was approved for production a year before the SQR-19. Consequently, the SQR-19 is not available to match LAMPS MK III fleet introduction. Accordingly, SQR-19 will be installed later concurrent with scheduled maintenance periods and availability of the SQR-19. LAMPS MK III and SQR-19 are being installed concurrently in DD 963 class ships. Because the DD 963 class receives a complete interoperable ASW upgrade consisting of the SQS-53B hull-mounted sonar, ASW control system, LAMPS MK III and SQR-19, their installations have the highest priority. Every effort is being made to install LAMPS MK III and the SQR-19 concurrently on FFG 7 class ships funded in FY 1981 and later.

TACTAS/LAMPS MK III

QUESTION: Is it your opinion that the TACTAS/LAMPS III systems are adequate to cope with the evolving Soviet threat including the ALPHA, OSCAR and the TYPHOON. If not, what are your plans?

ANSWER: The current ALPHA class Soviet submarine is a [deleted] target, at least in comparison to the OSCAR AND TYPHOON classes of nuclear submarines. Accordingly, the expected detection performance of existing (AN/SQR-18A) and planned (AN/SQR-18(V)1 and AN/SQR-19) TACTAS systems [deleted].

Although the data base is small, both OSCAR and TYPHOON appear to be (d) submarines. The SQR-19 TACTAS has a frequency cut-off [deleted].

LAMPS (both LAMPS MK I and MK III) are reactionary vehicles. That is, LAMPS responds to cueing provided from some other sensor, launches sonobuoys for redetection/localization and then attacks with either MK 46 MOD 5 torpedoes or ALWT. The sonobuoys carried in the LAMPS are effective against all Soviet nuclear submarines. Obviously, the noisier the target, the more effective they are. We believe that if cued by another sensor, our sonobuoys will have [deleted] redetection and localization.

With respect to our plan, we are examining a block upgrade for the SQR-19 which would address the current as well as the evolving threat. [Deleted.]

LEASING OF SHIPS

QUESTION: Tell me about the decision to charter 13 commercial cargo ships to support the rapid deployment of Marine Amphibious Brigades in crisis areas. I believe the initial plan was to build these ships. Would you explain the cost analysis which lead to your decision to lease the ships rather than build them.

ANSWER: The Navy did initially consider building TAKX ships and developed some specifications and estimates for such a program. However, in keeping with the mandate of Congress as set forth in the Merchant Marine Act, 1936, and often repeated by the Oversight Committees, the Navy relies on the U. S. Merchant Marine to meet its transportation needs whenever practicable. Our review in the Summer and Fall of 1981 led to the conclusion that the U. S. Merchant Marine was quite capable of providing the transportation services required in the TAKX Maritime Pre-positioning Program. It is noted that there are currently 17 privately owned and civilian operated ships stationed at Diego Garcia as part of the Near Term Pre-positioned Force and performing the same mission as the TAKX ships.

Knowing that the U. S. Merchant Marine could provide the required services, we conducted a study in October/November 1981, with the assistance of Coopers and Lybrand, to determine if it was also cost effective to charter rather than build the TAKX ships. The conclusion was that a chartering program, using standard commercial leverage lease financing techniques, would be cost effective. This conclusion was confirmed after the best and final offers were received and another cost analysis was performed by the Argent Group Limited, utilizing the final prices offered. Prior to the finalization of the awards, this conclusion was further confirmed by two other independent studies performed by the

House Appropriations Committee Surveys and Investigations Staff and the Institute for Defense Analysis.

In addition to the cost advantages shown under the chartering vs. purchasing studies, there are a number of other benefits favoring chartering. Those benefits include:

(1) shifting the risks of construction cost overruns and delivery of defective ships to private sector participants;

(2) utilizing commercial specifications and standards and private sector supervision of construction with an attendant cost savings of $450 million as compared to estimates for a Navy building program;

(3) creating the incentive to build efficient and reliable ships by placing the risk of excessive operating costs on the private parties designing the ships, selecting components and supervising construction;

(4) matching expenditures associated with the utilization of an asset with the receipt of benefits from that asset;

(5) accelerating the program completion by at least 18 months, thereby allowing early phase-out of some of the less efficient ships currently utilized at an estimated present value savings of $225 million;

(6) this acceleration of construction in FY-1983 not only created or preserved over 12,000 jobs in the U. S. shipbuilding industry but also averted the closing of at least three shipyards which are vital to the Nation's industrial base.

In summary, the Navy thoroughly considered a number of significant factors in reaching its decision to charter the TAKX ships. The results of the competitive procurement and the progress in the program to date have confirmed the correctness of that decision.

ANTI-SUBMARINE WARFARE (ASW)

QUESTION: Admiral, your statement speaks of the Soviet Navy having a mixture of nuclear and diesel submarines. I believe there have been some advocates of diesel submarines in our Navy. Do you see a role where these submarines would be useful?

ANSWER: Studies have repeatedly shown that diesel-electric submarines are not cost effective in adding to or maintaining our U.S. submarine force capability. Consequently, I do not see a role where these diesel submarines would be useful.

NEW JERSEY REACTIVATION GENERAL ISSUES

QUESTION: Please provide a comparison of the scope of work actually performed on the USS NEW JERSEY as compared to the scope of work originally planned. This comparison should include description and cost of Phase I reactivation and modernization work:

-- originally planned,
-- actually completed,
-- remaining to be performed,
-- deferred, and
-- deleted.

ANSWER: All work defined in the originally approved work package both for the reactivation and modernization will be completed during the SCN funding period for the budgeted $326 million. All ship systems are operational as required by the reactivation work package. The modernization package included installation of the TOMAHAWK and HARPOON cruise missile systems, Close-In Weapons System, modern cruiser communication suite, state-of-the-art electronic warfare and air search radar equipments, sewage collection and holding tank system, fueling at sea capability and extensive improvements in firefighting capability. Also included was the upgrading of the helicopter landing facilities, modest upgrades to habitability and lighting and conversion to Navy distillate fuel. All originally planned work will be completed by the end of the Post Shakedown Availability. As previously detailed, work items emerging as a result of trials and inspections will also be completed by the end of PSA within the SCN budgeted $326 million.

QUESTION: For Phase I reactivation and modernization work which remains to be completed, please provide milestone and cost estimates as to when this work will be completed.

ANSWER: All reactivation and modernization work planned for Phase I has been completed with the exception of those trial and inspection items previously indicated. As mentioned, these will be completed within the budgeted $326 million and $9 million post delivery costs.

QUESTION: For Phase I reactivation and modernization work that has been deferred or deleted, explain the Navy's reasons for these actions.

ANSWER: No Phase I reactivation and modernization work was deferred or deleted. Those work items emerging from trials and inspections will be completed by the end of PSA, 31 January 1984 within the budgeted SCN dollars.

NEW JERSEY REACTIVATION GFE

QUESTION: Please provide the following for that equipment diverted from other ships to the USS NEW JERSEY:

a. The name of the ship (active or inactive), for which the equipment was procured.
b. The cost of the equipment in (a.) above.
c. Explain how the Navy plans to replace this diverted equipment and the funding source to be used to replace the equipment.
d. Explain the resulting impact on the losing ships in terms of work/maintenance/overhaul delays.
e. For each affected ship, please provide cost, scope of work, and milestone data for that work originally and currently planned.

ANSWER: The following equipment was diverted from other ships to support the NEW JERSEY reactivation schedule.

SYSTEM	EQUIPMENT	SOURCE	COST ($ Thou)
NAVY DISTILLATE	F.O. Service Pumps (12)	CG 10/11	1,300
	F.O. Transfer Pumps (4)	CG 10/11	
	F.O. Cruising Pumps (4)	CG 10/11	
	F.O. Stripping Pumps (3)	CG 10/11	
RADAR	AN/SPS-49	CG 20	2,200
CIWS	Close-In Weapons System (2)	DD 972(2)	5,600
HARPOON	Missile System (4 Quads)	DDG 38(2)	1,900
		DDG 41(2)	

SYSTEM	EQUIPMENT	SOURCE	COST ($ Thou)
TACAN	AN/URN-25	CG 20	320
A/C	Air Conditioning Units - 125T (6)	DDG 4(2)	1,700
		CG 19(1 duplex)	
		CG 20(1 duplex)	
VHF COMM	AN/GRT-21 (1)	DDG 15(1)	9
	AN/GRR-23 (1)	DDG 15(1)	4
WSC-3 LOS	AN/SRA-33 Replacement (5)	AE 22(1)	363
		DDG 7(2)	
		DDG 15(2)	
AUTO COMM SYSTEM	AN/SYQ-7(V)2	FF 1040	700
	AN/SYQ-7(V)3 (Upgrade Kit)	LPD 10	
SAT COMM	OK-326A/WSC-3(V) RACK	AD 43	88
	OE-82C/WSC-1 ANT	TATF 171	87
WSC-3 LOS	AN/WSC-3(V)7 (16)	CG 20	425
	C-9351/WSC-3(13)	CG 20	
FLSATCOM SECVOX	CV-3333/4 (2)	LST 1193(1)	60
		ARS 43(1)	
	ON-143(V)4/USQ (2)	LST 1193(1)	165
		ARS 43(1)	
IFF	AN/UPX-27 (2)	LKA 116(1)	200
		LST 1187(1)	
	AN/UPM-137A	LKA 116	
NAVSAT	AN/WRN-5A	DD 969(2)	475
	AN/WSN-5	DD 969(2)	1,300
NTDS LINK 11 (RCV only)	CV-3507/WSQ-74	FFG 36	288
SINGLE AUDIO SYSTEM/COMM SECURITY SYSTEM	SA-2112(V)4/STQ	DDG 41	650
RECEIVER	AN/SSR-1 SATELLITE RCVR	CG 10/11	65
BROADCAST	AN/UCC-1D(V) TR 4	CG 10/11	92

The impact of the diversions on the losing ships will be negligible since all equipment has or will be replaced with NEW JERSEY SCN funds. For the affected ships, there is no change in the scope of work/maintenance/overhaul delays or cost. Equipments diverted will be replaced in the affected ships during subsequent maintenance periods.

NEW JERSEY REACTIVATION BOARD OF INSPECTION FINDINGS

QUESTION: The Navy's Board of Inspection and Survey recently completed an inspection of the USS NEW JERSEY.

a. Provide a summary of the Board's findings and its recommendations.
b. Please provide the Navy's plan of action to correct the deficiencies reported by the Board, and identify the source of funds and fiscal year that will be used to pay for correcting the deficiencies.
c. After considering the work actually performed, deferred work to be completed, and work to correct the deficiencies identified by the Board of Inspection, what will be the total cost of the modernization/reactivation of the USS NEW JERSEY?

ANSWER: The Board determined NEW JERSEY to be fit for unlimited active service and recommended it be placed in commissioned service.

All starred and safety discrepancies noted by the Board will be corrected or otherwise resolved.

As feasible, every effort will be made to correct all discrepancies prior to and during NEW JERSEY's post shakedown availability (October 1983-January 1984). These will be funded within the SCN budgeted $326 million reactivation and $9 million post delivery funds. Remaining INSURV discrepancies, if any, will be corrected during follow-on upkeep and maintenance periods.

The total cost of reactivation and modernization, including correction of INSURV discrepancies, will be the SCN appropriated $326 million reactivation cost and $9 million post-delivery and $11 million outfitting cost. Also funded within those totals is the correction of any emergent repairs occurring during NEW JERSEY's Shakedown Deployment.

NAVY AUDIT SERVICE REVIEW OF USS NEW JERSEY REACTIVATION

QUESTION: At the request of the Deputy Under Secretary of the Navy for Financial Management, the Naval Audit Service is conducting two reviews on the reactivation/modernization of the U.S.S. New Jersey. One of the audits is being conducted here at the Naval Sea Systems Command, Washington, D.C. Explain exactly what the Naval Audit Service is reviewing with regards to the U.S.S. New Jersey and what specifically did the Deputy Under Secretary want them to look at?

ANSWER: The audit was requested to provide us objective and independent assurance that the reported cost of the work on the New Jersey is complete and accurate. The audit is limited to this specific objective.

QUESTION: What is the status of these audits?

ANSWER: The audit work is not yet complete. I am advised that the audit work will be completed by May 1, 1983.

QUESTION: Provide an overview of the Naval Audit Service findings and recommendations.

ANSWER: The audit is incomplete and the results are unknown at this time.

QUESTION: Please provide this committee with copies of the reports.

ANSWER: A copy of the audit report will be provided as soon as complete, about May 1, 1983.

BATTLESHIP REACTIVATION

QUESTION: The reactivation of the battleship U.S.S. Iowa will be performed by Litton Shipbuilding located at Pascagoula, Mississippi. Explain the reasons Litton Shipbuilding was selected to do the work, and the advantages Litton offers over other private sector shipbuilders and Naval shipyards.

ANSWER: The Ingalls shipbuilding Division of Litton Industries in Pascagoula, Ms. is one of the five shipbuilding firms that responded to the Navy's request for proposals (RFP). The RFP was sent out by the Navy in March, 1982 and contained the Navy's requirements for the reactivation. It was sent to all interested companies on the East and Gulf coasts and responses were requested by the end of May. Upon receipt of the proposals, the Navy instituted a formal source selection process to review the five proposals and to select the successful contractor. The selection process involved evaluation of all proposals in several competitive areas including: management capability, resource availability, planning and technical capability, experience, and the proposal cost. As a result of this process, the contract was awarded to Ingalls.

A contributing factor in the decision to award the contract to Ingalls was a determination that there was insufficient capacity in the Naval shipyards to accommodate the U.S.S. IOWA without a major realignment of scheduled overhauls.

QUESTION: Provide the Navy's latest cost estimate for SCN and RDT&E required to complete the reactiviation and modernization of the USS IOWA.

ANSWER: The Navy's cost estimate to complete the reactivation and modernization of the USS IOWA is $385.3 million SCN and $6.0 million RDT&E.

QUESTION: Provide a list of the other ships Litton is currently building for the Navy at Pascagoula, MS. What assurances are there that Litton can complete work on the U.S.S Iowa on schedule without adversely affecting work schedules on the other ships? If work on other ships will be delayed, please explain the nature and length of delay.

ANSWER: Ships currently at Litton are: DD-997 (completed and scheduled for departure on 3/31/83), CG-48, CG-49, CG-50, CG-52 and CG-53. CG-47 was delivered to the Navy on 13 December 1982. All ships currently under construction are on or ahead of schedule. In addition to the above, three DD-963 class ships are undergoing overhaul - all are on or ahead of schedule.

QUESTION: What ship work did the Navy divert from Litton in order for them to accommodate the U.S.S. Iowa? For these ships diverted, please provide information to show the type of work affected and where and when this work will be performed. What cost impact and time delays resulted from diverting the ship work from Litton?

ANSWER: The Navy did not divert any work from Litton in order to accommodate the U.S.S. Iowa. The U.S.S Iowa was awarded after soliciting all private sector contractors desirous of the work on the east and gulf costs.

T-AO TECHNOLOGY TRANSFER

QUESTION: Which domestic companies is Avondale Shipbuilding Company considering to contract with for this "technlogy transfer" option?

ANSWER: Avondale Shipbuilding Company has contracted with Colt Industries, Beloit Wisconsin, for the technology transfer feature of this program.

QUESTION: Which foreign manufacturer(s) is Avondale Shipbuilding source for the diesel engines and gears for the first three ships?

ANSWER: Avondale Shipbuilding has selected Semt- Pielstick (French) as the main engine supplier for T-AO. Stock-Werkspoor (Dutch) and B&W (Danish) engines were also under consideration. Avondale has selected an American company, Cincinnati Gear, to provide the main reduction gears.

QUESTION: Explain how Avondale Shipbuilding plans to accomplish this "technology transfer" (such as co-production, etc.) and the status of their efforts in this area.

ANSWER: Technology transfer will be accomplished by Colt Industries constructing the main engines at the Wisconsin facilities under a licensing agreement with Semt-Pielstick.

The shipbuilding contract originally called for the technology transfer to commence upon excercise of the FY 1984 option (NLT 31 March 1984). In December 1982, Congress directed that the diesel engine technology transfer program be funded with FY 1982 T-AO program savings. A contract modification has been negotiated for $12.7 million which funds the start-up phase of the transfer program. The licensee has started the initial phase of the transfer program based upon issuance of this contract modification. The technology transfer will be completed in the FY 1984 program, when the engine for the fifth ship, which has the first ship engine built by an American manufacturer, will be funded for an additional $5.2 million over the cost of the Semt-Pielstick engines. In addition, $10.4 million is included in the fiscal year 1984 request for the American manufacture of the diesel engines for the third and fourth hulls, should the production of up to three ship sets of engines be achievable.

QUESTION: What other ship classes use the engines currently manufactured by the foreign manufacturer(s) being considered by Avondale Shipbuilding Company for the T-AO 187 program?

ANSWER: No other U.S. Navy ship class uses the exact model engine selected for T-AO. The LSD 41 class program uses a smaller version of the Colt-Pielstick engine selected by Avondale shipbuilding company for the T-AO program.

As of the end of 1982, in excess of 80 T-AO model diesel engines are in service in foreign-flag merchant ships.

QUESTION: Considering the T-AO 187's planned program size (21 Ships), what is the Navy's rationale for:

A. Establishing the "technology transfer" as a contract option instead of a contract line item.

B. Waiting until the fourth and fifth ships for the "technology transfer" to take effect.

C. Making the technology transfer option contingent on receiving construction funds for at least two T-AO 187's in fiscal year 1984.

ANSWER: A. Original planning assumed that the technology transfer would be part of a five-ship buy, where the Navy would award both the FY 1982 and FY 1983 ships at the same time, along with advance material buys for the three FY 1984 ships. Congressional action on the FY 1983 budget request introduced a note of uncertainty by first cutting and then restoring the FY 1983 ships, and cutting all advance procurement funds for the FY 1984 program. The Navy therefore decided to cover the techology transfer on a contingency/option basis rather than on a contract line item.

B. The technology transfer entails a number of actions by licensees such as: facilities improvement, translations, technical data translation, tooling, hiring, training, etc., which would have to take place before the actual start of manufacturing engines. Based on feedback from potential shipbuilders, licensees, and engine suppliers, it was determined that the fourth ship might be the earliest at which technology transfer could take place without detrimental effect to the shipbuilding schedule.

C. Based on previous responses, the issue is one of program stability and lack of long lead time funding. The start up costs for the transfer of technology have now been authorized and funded by FY 1982 funds, with the production costs requested in FY 1984.

QUESTION: Under what conditions would the Navy not exercise the technology transfer option? Explain.

ANSWER: The technology transfer has been initiated per Congressional direction.

QUESTION: Explain how the Navy expects to fund this "technology transfer" option--identify the specific fiscal year appropriation/request, budget line item and amount(s).

ANSWER: A modification to the T-AO contract has been negotiated for the "technology transfer." The negotiated amount of this modification is $12.7 million and cites fiscal year 1982 funds, as previously directed by Congress (House Report 97-980). The $5.2 million production costs associated with the American manufacture of the diesel engines for the fifth ship are properly included in the fiscal year 1984 request. In addition, $10.4 million is included in the fiscal year 1984 request for the American manufacture of the diesel engines for the third and fourth hulls, should the production of up to three ship sets of engines be achievable.

QUESTIONS SUBMITTED BY SENATOR PROXMIRE

ECONOMIC CONDITIONS AS INPUT TO BUDGET PROCESS

QUESTION: Mr. Secretary, let me read you a quote from one of our Nation's best known defense experts from a previous Administration and see if you agree with his conclusions:

"The identification of a threat to security does not automatically require an expenditure in the defense budget to neutralize it. The Nation's total resources being limited, it is necessary to consider what is being given up to meet the threat. The defense budget must be seen not only in terms of what we must defend against, but what we have to defend. The more we take from the commonwealth for its defense, the smaller it becomes."

In other words, the defense budget should not just be tied to the threat but to our economic condition. Do you agree with this statement?

ANSWER: No, I do not. Though I agree that the Nation's economic condition is a factor which must be carefully taken into consideration when formulating the entire federal budget, including defense. I also believe that one of the first and most important functions of government is to "provide for the common defense." This requires an objective assessment of the threat, from which a strategy is derived which will successfully counter the threat while supporting our worldwide commitments. This Administration has carefully and comprehensively provided this country with such a strategy. From the strategy, the defense budget has been structured. It takes fully into account the economic condition of the country, the underfunding of previous administrations, and the contribution of our allies worldwide. Though we are planning increases, these increases are far less than those other sectors of the Federal budget have experienced; and we still plan to spend less on defense as a percent of the GNP than did some other administrations. Our defense program is affordable and it is necessary in order to provide the modernization and expansion of our armed forces required to assure the overall security of the nation.

F/A-18

QUESTION: I need not say that the F/A-18 program has come in for its share of criticism lately. Last October the Navy severely criticised the attack version, the A-18, for lack of maneuverability and range. Let me ask you a series of questions about the current status of the F/A-18 program.

First, I understand that you have conceded that the F/A-18 HORNET is not as capable as either the F-14 or the A-6 it will be replacing. Is that correct?

ANSWER: The F/A-18 was designed to replace the F-4 and A-7. It is not intended to replace the F-14 or A-6. The HORNET's multi-role capability complements the more specialized performance of the A-6 and F-14, greatly enhancing overall air wing capability across a broader mission spectrum.

QUESTION: Second, press reports indicate that you are trying to save the F/A-18 program by simply changing its name and slightly reshaping its mission. A high ranking, unidentified Navy spokesman has been quoted as saying that the program is in for "a massage" job consisting of redesignating the HORNET as a strike fighter, followed by lowering the performance characteristics of the airplane -- particularly the attack version. Have you redefined the original Navy performance requirements?

ANSWER: The F/A-18 HORNET has been designated a strike fighter since the VFAX study in 1974 identified an operational requirement for a multi-mission aircraft to replace the F-4 and A-7. Performance goals and thresholds to provide this multi-mission capability were established in the VFAX Operational Requirement promulgated in 1975.

As development of the strike fighter progressed, technological development was more accurately assessed and operational requirements more closely defined. This allowed cost versus performance trade-offs to be made without detracting from the ability of the F/A-18 to meet Navy/Marine requirements.

The result is that we now have an F/A-18 naval strike fighter entering the fleet that meets, in all essential respects, those very optimistic initial VFAX requirements.

QUESTION: Does the A-18 at this time meet the Navy's range requirements?

ANSWER: The F/A-18 provides the range required of a naval strike fighter.

QUESTION: I understand that an interim report from DOD's Inspector General's Office shows that the Navy has juggled its books in possible violation of the federal statutes by using money appropriated for support equipment to pay for cost overruns on the F-18 airframe. Do you have personal knowledge of this interim report and will you summarize its conclusions for use?

ANSWER: I am aware of the draft of a proposed audit report prepared by the Office of the Defense Inspector General. However, it would be inappropriate for me to disclose the information contained in the draft report. The Navy is staffing comments for the DOD IG to consider in preparing the final report, to be submitted to the Secretary of Defense. The books were not juggled.

D-5 AND MX

QUESTION: Admiral, I understand that you have testified that the D-5 missile being designed for the Navy's fleet of TRIDENT ballistic missile submarines is just as accurate and lethal as the land based MX. First, Admiral, will you confirm this statement, and second, if it is true that the D-5 is as accurate as the MX--why don't we just deploy more D-5s at sea or D-5s on land instead of going forward with the MX?

ANSWER: While the accuracy goal for MX is somewhat better than D-5's accuracy threshold at the operational ranges required, the D-5 is currently programmed to carry slightly fewer, but higher-yield warheads than the MX. All in all, the MX and D-5 are comparable in capability on a per-warhead basis at operational ranges.

I have always supported the deployment of a capable ICBM in a survivable basing mode, and I continue to do so for several sound military reasons. Replacing MX with sea-based D-5 would, in effect, surrender some of the redundancy and diversity we need in our strategic forces. This redundancy provides hedges against uncertainties in system performance and unanticipated changes in the threat, and must remain a key factor in weapon system development and acquisition. Diversity of systems complicates enemy problems in providing an adequate defense and in structuring credible threats to U.S. systems. With respect to the option of deploying D-5 missiles on land, the range of D-5 with its currently planned payload is not sufficient to cover the Soviet target base from the continental U.S. The number of warheads per missile would have to be reduced, and this downloaded D-5 would be less accurate at these longer ranges than when operated as a sea-based system closer to its targets.

The proper mix of forces depends on many factors: the military effectiveness of any system by itself and in combination with other forces, its stabilizing influence in a crisis, its compatibility with U.S. arms control objectives, the flexibility it provides the National Command Authorities, its costs and environmental impact, and, finally, political considerations and internal and international perceptions. Viewed in this balance, I support continuation of the TRIAD. Furthermore, when we achieve an arms control agreement, it will be important that we enter into that agreement with all legs of the TRIAD modernized.

SAC FY-84 NAVY POSTURE HEARING

QUESTION: It has been my observation that one of the most difficult things to ask of the three Services is to cooperate on a program where the various parties are guarding their missions and roles. In this context, could you tell us whether or not the cooperative effort between the Air Force and the Navy is working out in mating the HARPOON missile system to the F-15 aircraft and to the B-52 bomber and the value of these programs if they do succeed?

ANSWER: The cooperative effort between the Navy and the Air Force has worked out well on the proof of concept development and test efforts for HARPOON launches by B-52 aircraft. Both Services have cooperated at all levels in contributing expertise, equipment and operational support to these tests, which have demonstrated that a modified B-52 aircraft can successfully launch an effective HARPOON anti-surface ship attack with external targeting assistance. I am not aware of any program or inter-Service effort to mate the HARPOON missile with the F-15 aircraft.

In terms of threat to existing and projected U.S. naval capabilities, with respect to using intrinsic U.S. Air Force capabilities, the Services are agreed on the following priorities for Air Force support of maritime operations: Anti-air warfare, aerial minelaying and anti-surface ship operations, in that order. Thus, while mating HARPOON to B-52s does enhance total maritime capability, I believe that maritime enhancements or emphasis on Air Force aircraft should be focused first on anti-air warfare (AWACS, Air-refueling, F-15) and aerial minelaying (B-52) roles as a matter of priority for total US military capability.

The US Navy welcomes any assistance in countering the increasingly significant and sophisticated global threat to US and allied maritime security. Arming B-52s with HARPOON missiles and modifying them for external targeting assistance will provide added US capability for anti-surface ship warfare, the number three mission priority for Air Force assistance. It may also enhance B-52 survivability for conduct of its primary missions, as well as for operations in Aerial Minelaying.

QUESTIONS SUBMITTED BY SENATOR JOHNSTON

JVX

QUESTION: Mr. Secretary, in the preliminary design phase of the JVX program, do you feel confident that the technical issues facing this new aircraft can be properly addressed and resolved?

ANSWER: I am confident that the program is currently structured to satisfactorily handle all the technical issues before proceeding into Full Systems Development in Fiscal Year 1985.

Questions regarding technical risk and the adequacy of our preliminary design are addressed in a NASA's Ames Research Center technical paper.

This technical report, produced by the Powered Lift Flight Investigations Branch and endorsed by NASA/Ames' Director of Aeronautics and Flight Systems, is very comprehensive and addresses all the areas of technical concern raised to date.

The report confirms that we are embarked on the right course in JVX and verifies that the technical breakthroughs needed for JVX are all behind us and that the challenges ahead of us are straightforward engineering and management issues.

(The NASA report, as mentioned above, is attached.)

QUESTION: Mr. Secretary, since the Bell/Boeing team is the only responder to the RFP, do you feel that a lack of competition will adversely affect this program?

ANSWER: Defense Acquisition Regulations prevent me from disclosing the number of names of any bidders for a contract during the period that the proposals are being evaluated. If we have only one qualified bidder, we will not suffer grievous harm. There are a number of aspects which should be considered.

In a major program like JVX, the development project costs, while substantial, are only a small fraction of the total program. Since all development projects are conducted under "cost plus" type contracts, competition in development offers only a limited potential to serve as a way to save costs. In real, then year dollars, the ratio of the production program costs to development costs is approximately 15 to 1. That is very common for a program of this magnitude. Therefore, the opportunities for competition to provide for significant cost savings are roughly 15 times greater in production than in development.

The Navy has every intention of doing whatever is necessary to maintain competition in this program through the production phase. There are various techniques which might be employed to do this and we are considering them at this time. It would be premature at this point to discuss what we might do, but we will have our strategy for production competition formulated by the time we present our plan for program continuation to the Secretary of Defense at the Milestone II decision point in mid-1985.

QUESTION: Mr. Secretary, what operational advantages does the Tilt Rotor Aircraft offer the Navy/Marine Corps mission that either an upgraded, existing helicopter or advanced helicopter could not provide?

ANSWER: For the mission addressed the tilt rotor concept offers a significant advancement over any kind of helicopter. This will be true for a large number of other missions as well.

For the Marine Corps, the JVX tilt rotor's greatest advantage will be in its "Assault Lift Productivity." The JVX tilt rotor's combination of range, high cruise airspeed and greater payloads will yield over twice the productivity of a conventional rotor craft during the most crucial phase of the amphibious assault, as well as during more routine tasks such as logistic sustenance of forces afield. These capabilities open a wide range of tactical options for the force commander which do not exist today because of the inherent limitations of helicopters.

The tilt rotor retains good lift performance in a hover, can fly farther, faster, and more efficiently than a helicopter, and will offer the following additional advantages as well:

- At the same speeds or at greater speeds than a helicopter, the tilt rotor's vibration and stress levels will be about a third that of a helicopter. This will yield beneficial results in human fatigue factors and system reliability for the aircraft and also in extended component lives, reducing support costs.
- The tilt rotor's internal and external noise levels in forward flight, including high speed forward flight, will be less than half that of a helicopter. This will produce benefits in the areas of reduced crew fatigue and improved performance, and will also enhance combat survivability. Survivability in combat is also enhanced by the higher speed and maneuver capability provided by the conventional wing.
- The tilt rotor will be able to fly very efficiently at higher altitudes than a helicopter. With the JVX, we will be able to achieve unrefueled ferry ranges on the order of 2,100 nautical miles. This will add a measure of crisis or contingency responsiveness not attainable through conventional rotorcraft, either current or advanced.

(The NASA Report follows:)

National Aeronautics and
Space Administration

Ames Research Center
Moffett Field, California 94035

NASA

Reply to Attn of:

FHP:237-5/4721

March 21, 1983

Captain James A. Magee
OP-506E
Chief of Naval Operations
Washington, D.C. 20350

Dear Captain Magee:

I have written an assessment of the JVX program technical issues (enclosed) based on our XV-15 program experience as you requested on February 17, 1983. Also enclosed is a copy of NASA TM 84222. I hope they meet your needs. Please do not hesitate to call if we can be of further service in regard to the technical aspects of the program.

Sincerely,

John P. Magee
Chief, Powered Lift Flight
Investigations Branch

Enclosures

Concurrence:

As the previous Program Manager for the XV-15, I have had ample opportunity over the past ten years to see this technology progress to the mature state it is today. I consider the technical risk of the JVX a non-issue. The Full Scale Development of the Tilt Rotor Aircraft should not present any more problems than the extension of the 707 technology to the 747 aircraft.

David D. Few

David D. Few, Deputy Chief
Helicopter & Powered Lift Tech. Division

I concur fully in the attached assessment and the above statements.

Tom Snyder

C. Thomas Snyder
Director, Aeronautics
and Flight Systems

JVX Program Risk: Prototype Development or Full-Scale Development

by J. P. Magee
NASA Ames Research Center

ACKNOWLEDGEMENT

The section on simulation was contributed by Mr. T. Alderete of Simulation Sciences, Ames Research Center, and also uses material taken from "Simulation of the XV-15 Tilt Rotor Research Aircraft," G. B. Churchill and D. Dugan, NASA TM 84222, USA AVRADCOM TR-82-A-4 with Mr. Churchill's permission.

JVX Program Risk: Prototype Development or Full-Scale Development?

Introduction

A great deal of discussion has centered around the issue of whether or not it is prudent and necessary to proceed with a prototype program prior to full-scale development of a tilt rotor JVX aircraft or whether a Full-Scale Development (FSD) program can proceed with technical confidence. This discussion as seen in the political arena revolves around the timing of FSD dollars being committed to the program since the first air vehicle serves the engineering prototype role in either case. It is not our purpose to discuss military requirements, or political and financial programmatic issues, but the following remarks are, in summary, why it is believed to be appropriate for full-scale development to proceed from a technical point of view.

To clarify the basic issue, it must be pointed out that in full-scale development, the first aircraft will proceed through engineering flight test and that developmental problems will be found that require solution as the program proceeds to full production. This has been true of every air vehicle ever developed. The key difference between this type of approach and a dedicated prototype program prior to full-scale development is whether or not the developmental problems found are minor enough to be solved concurrently with the planned program within the management reserve dollars or will some problem be found that is sufficiently large in scope or beyond our understanding to cause a major slippage and dollar escalation beyond the planned program expenditures. If it can be shown that the probability of this latter scenario is indeed low, then we should proceed with full-scale development, shorten the DOD acquisition time, lower the overall costs, and provide a faster industrial response to eventual commercial usage of the technology.

If a significant risk of a major technological problem exists, then a prototype step would indeed be prudent. It is our contention, that in this case, the technical risks are the normal problems of airplane development, and the thorough program of checks and crosschecks in the wind tunnel and flight simulators that form a necessary and normal part of the initial program will protect against unknown problems. If the expertise developed over the last 20 years is properly applied, the problem of success reduces to a management issue and not a technical one.

The following paragraphs deal with the subject from a number of different perspectives; the size issue, the use of simulation to prove the aircraft flight dynamics, using the XV-15 as a case in point, and an analysis of the wind tunnel test program to show how the tests protect against subsequent difficulty and form the basis for sound decision-making.

The Size Issue

The question of size poses two different questions. Are the components of the JVX air vehicle outside the range of current industry experience by virtue of their size? Are there technological size issues which present an inordinate technical risk to the JVX configuration?

The first of these questions is relatively easy to answer by a comparison of JVX components with those existing in the current inventory. The second question must be answered in the light of technological development of the tilt rotor configuration which has been ongoing since the 1950's.

First, let us review the air vehicle components in the light of existing experience. For this purpose, data are taken from the technical evaluation studies performed by the Government in early 1982 as typical of JVX; however, these may not be identical to the Contractors' designs but will be close enough for this evaluation. A cursory examination of the vehicle can remove the fuselage, empennage, and cockpit from contention since many examples of similar size aircraft exist in the inventory. The development of these components for JVX will take advantage of advances in composite materials, which are relatively new, but the programmatic risks involved are no different from a similar development of a new helicopter or fixed-wing aircraft.

The rotor system for a JVX size machine will be between 37 and 40 feet in diameter and operate at about 770 ft./sec. tip speed. Several larger rotor systems for helicopters exist, for example, CH-47C--diameter 60'--tip speed 770 ft./sec., and the YCH-53E--diameter 79'--tipspeed 700 ft./sec. There is little doubt that a JVX size rotor can be built that will be structurally sound. The fact that the rotor is also to be operated in the propeller mode will not cause any undue difficulty since in general the operating aerodynamic environment is more benign than that found in the helicopter configuration even at much lower speeds.

The rotor upper controls are the mechanisms used to introduce collective and cyclic control inputs into the rotor in the same manner as in a helicopter design. The design of these systems depends on the blade pitch inertia, rotational speed and the aerodynamic environment in which the rotor operates. For the JVX rotor system, the blade pitch inertia is lower than for existing helicopter blades, and although the rotational speed is somewhat higher, the upper controls design loads will be less than would be found in a high speed helicopter design, and well within existing industry experience.

The power train for the JVX is made up of a series of gearboxes and shafting. In the case of gear train design, the largest bevel gear in the JVX is likely to transmit about 4,870 ft. lbs. of torque which is small by comparison to a bevel set in the XCH-62 transmission designed for 7,200 ft. lbs. The XCH-62 transmission has been successfully tested. The maximum reduction ratio for the bevel boxes is of the order of 2.0 to 1 which is modest by industry standards (up to 3:1 and even 5:1 at low torque).

The main rotor transmission delivers a maximum torque of 153,300 ft. lbs. which compares with the CH-53A at 210,000 ft. lbs., the XCH-53E at 342,000 ft. lbs., and the XCH-62 at 358,000 ft. lbs. The JVX rotor transmission requires an RPM reduction ratio of 32.96:1 which is less than XCH-53E at 35.8:1, the XCH-62 at 51.2:1, and is comparable to the CH-53A.

In short, the elements of the power train are well within the industry's prior experience range.

The wing and nacelle structure are not unusually large components that would cause size to be a fabrication problem; however, the design requirements for these components are unusual because of the configuration and will be discussed in a subsequent paragraph.

The control system has no unusual requirements except for the conversion actuation and the requirement to phase out helicopter controls as the nacelle is tilted towards airplane flight. These requirements were satisfactorily handled in the XV-15 without difficulty using mechanical systems. Performing the control mixing functions electronically is much preferred and will be significantly easier in the JVX than was the XV-15 case. The conversion actuators and control system actuators will be larger than the XV-15 because they are required to move larger nacelles and control surfaces; however, we are not stretching the state-of-the-art in this instance by virtue of size.

The hydraulic/electrical and fuel systems present no difficulties with regard to size, although transferring electrical and hydraulic power and fuel across the tilt axis is an additional design problem in the tilt rotor case. In the XV-15, this problem was handled by designing a torsion loop for the electrical cables and using rotating swivel fittings for fluid transfer. To date, we have had no instances of problems in this area. Such fittings are also common on gimballed rocket engines.

In summary, and in answer to the first question raised, the design of the elements of the JVX aircraft are well within industrial experience and should not constitute a size-related issue.

The second of the two questions deals with size-related technology issues; that is to say, can we define the right design criteria and to predict what the outcome will be when the larger vehicle is assembled and proceeds to flight test.

The issue which would cause the largest cost impact and represents therefore the greatest program risk is the ability to design for adequate wing-nacelle-rotor aeroelastic stability. For the wing and nacelle structure, the strength-related design criteria are different from other aircraft because of the requirement to pick up the vehicle at the wing tips. This is easy to analyze, and although different, should not be a problem area. Superimposed on the strength criteria and in the case of the JVX design, an overriding consideration is the need to provide sufficient chordwise and torsional stiffness to assure aeroelastic stability throughout and beyond the aircraft's operating range. Aeroelastic stability requirements are commonly design drivers for many high speed aircraft.

The stiffness criteria are developed using analytical methods which have been verified by hundreds of hours of wind tunnel testing and which were used to predict the successful aeroelastic behavior of the XV-15. Aeroelastic methodology capable of handling this design problem has been developed in three locations; at Bell Helicopter, Boeing-Vertol, and at NASA Ames Research Center over a period of 20 years. The most comprehensive of the available methods is the one developed by Dr. Wayne Johnson at NASA Ames Research Center, and this methodology has been made available to the U.S.

industry and in some cases is used in preference to their own. Thus, the Government has at its disposal the technical tools and expertise to properly evaluate the contractors' design, and the contractors' are aware of it. The dynamics of the JVX wing-nacelle-rotor will be quite similar to, but not a direct scale up of the XV-15. The dynamic similarity is sufficiently close that prediction of the JVX dynamic requirements falls into the high confidence level especially since the program is protected by large-scale model testing (20' to 25' diameter) of the actual JVX configuration to confirm the predicted stability prior to FSD.

A second technology area which can be critical is that of guaranteed aerodynamic performance. This is an important issue because unexpectedly low performance would reduce the fuel load or payload available leading to compromised mission effectiveness. These issues are dealt with again later in this evaluation in terms of wind tunnel and static test safeguards. Here we are addressing the influence of size. In general, as size increases, aerodynamic performance gets better, and the problem becomes one of accurately assessing the increase to properly take account for of it. It was pointed out earlier that the size of the JVX rotor system is well within the range of current helicopter rotors, and the scaling of rotor performance within that range can be based on an extensive data base and a wealth of experience.

The problem of drag estimation for the JVX tilt rotor configuration is not different from any other fixed wing or helicopter vehicles. Historically, contractor initial estimates have been low, and Government evaluations generally anticipate the fact that wind tunnel data will show a larger value. The JVX size and shape does not complicate this problem.

The loss of lift in hover due to downwash impingement on the wing is generic to this concept, and the magnitude of the loss will be size dependent, if the design results in good flow turning around the leading and trailing edges of the wing. The scaling effect is quite strong at small-scale (low Reynolds number) and becomes less important as size (Reynolds number) is increased. Two-dimensional and three-dimensional generic test data as well as full-scale XV-15 data and half-scale JVX data will be available before the decision to proceed with FSD and should provide an adequate data base for sound decision-making. The magnitude of the download loss for the JVX vehicle will probably be between 5 and 10 percent of the available thrust. If an optimistic error was made of even 20% of the magnitude of the loss, the result would be a 1 or 2% loss of aircraft performance and contingency planning could allow for this. The size effect is unlikely to cause an error that large.

The estimation of power losses in the transmission, engine inlet, and IR suppressor are not a size issue although experimental verification of the latter two numbers is needed to make a sound judgment before FSD.

A third technology area that is size-related is in the placement of design natural frequencies. As the aircraft gets bigger, the RPM of the rotor reduces in order to maintain a reasonable blade tip speed. This means that the increment between harmonics of RPM is smaller for a larger aircraft. To avoid dynamic amplification of fatigue loads, the natural frequencies of the aircraft structure need to be placed off the harmonics to avoid resonance. This phenomena is well understood and is routinely dealt with in the helicopter industry for larger sizes and lower RPM. The larger RPM operating range of the tilt rotor causes some additional complication; however, the problem is protected against by; (a) accurate modeling of the air vehicle structure at large-scale (1/2 scale), (b) design flexibility to modify component stiffness and change frequencies without major redesign, and (c) a well developed mathematical design tool NASTRAN exists that gives excellent prediction capability when properly used.

In summary, the size of the aircraft components is within the industry's experience range, and the size effects on technology are sufficiently well understood that major difficulties are unlikely.

The Use of Simulation to Prove the JVX Aircraft Flight Dynamics and Handling Qualities at NASA Ames Research Center

This section was written using material provided by Mr. T. Alderete of Simulation Sciences at NASA Ames and extracting and editing material from "Simulation of the XV-15 Tilt Rotor Research Aircraft," G.B. Churchill and D. Dugan, NASA TM 84222, USA AVRADCOM Report 82-A-4 with Mr. Churchill's permission.

Historical Perspective

Ten years ago, Ames' Simulation Laboratory had an established real-time flight simulation capability, but had little experience with the problems of rotorcraft simulation. Rotor mathematical models were of the directed thrust vector type suitable for studies in which only the flight path was of importance. These models were limited in that they did not allow design engineers to study the complexities of the rotor systems' behavior. It was then the first real-time, man-in-the-loop simulations of tilt rotor aircraft began at Ames that incorporated the tip-path plane rotor model. This model allowed engineers to investigate the rotor characteristics as though it were a disc that pivoted at the rotor hub; suitable for study of the handling qualities of the rotorcraft in limited flight regimes. In the mid-1970's, Ames simulated the Rotor Systems Research Aircraft with a blade element rotor model. This type of modeling remains today as the most sophisticated model used in real-time simulation work allowing study of individual rotor blade motions.

Currently, almost all rotorcraft simulations use either the tip-path plane or the blade element type of rotor model. There are benefits and costs associated with each of these models, and as might be imagined, the more dynamically complete blade element model is the more costly in terms of computational capability and human resources required to model, program, and document. Ames' current computational facilities are quite capable of handling the tip-path plane model, and our nearly operational facilities will handle the blade element model.

Current Capabilities

The salient features of the Ames Simulation Laboratory can be briefly summarized as follows:

Computational Facilities--The two major computer systems consist of a main-frame (host) computer supported by minicomputers that share the computational burden and control simulator hardware. The host can be a Sigma 8 (medium speed) or CDC-7600 (high speed) computer.

Software Systems--The software is made up of a real-time executive, an on-line debugger, and programs that compute the rotorcraft's behavior. The debugger provides the experimenter wth extraordinary capability to test, examine, and probe the aircraft under study.

Motion Cueing--The two major motion generators are the Flight Simulator for Advanced Aircraft (FSAA) and the Vertical Motion Simulator (VMS). Both are full six degree-of-freedom, large motion systems.

Visual Displays--The pilot is provided an out-the-window scene that can be produced either by closed circuit TV image of a model terrain board or by computer generated imagery (CGI). The CGI is a wide field of view scene. Heads up and/or heads down displays can be represented to the pilot independent of his out-of-window scene.

Aural Cueing--A sophisticated sound generator can be programmed to simulate the acoustic environment important to the pilot.

Applications Using the XV-15 Program as an Example

The capabilities of the Ames laboratory are directed toward real-time, piloted, flight simulation for the purpose of research into flight vehicle behavior, including handling qualities and various flight systems (controls, rotors, propulsion), and how the pilot interacts with the vehicle. The situation under which these studies occur can include exploring new areas of the flight envelope, mission or task evaluation, and various failures or degraded conditions. These tests are performed in a controlled, repetitive, cost effective, and safe manner. The fidelity can be improved to whatever extent conditions allow, that is, if modelling techniques exist and verification data exist, then the simulation can be upgraded at any time. In short, simulation encourages the question "what if," then allows the answer to be studied.

The XV-15 Tilt Rotor Research Aircraft Program (TRRA) exemplifies the effective use of simulation from issuance of the request for proposal through conduct of a flight test program. From program inception, simulation complemented all phases of XV-15 development. The initial simulation evaluations during the source evaluation board proceedings contributed significantly to performance and stability and control evaluations. Eight subsequent simulation periods provided major contributions in the areas of control concepts, cockpit configuration, handling qualities, pilot workload, failure effects and recovery procedures, and flight boundary problems and recovery procedures. The fidelity of the simulation also made it a valuable pilot training aid, as well as a suitable tool for military and civil mission evaluations. Recent simulation periods have provided valuable design data for refinement of automatic flight control systems. Throughout the program, fidelity has been a prime issue and has resulted in unique data and methods for fidelity evaluation.

After the development of the detailed mathematical model, a valuable research tool was available to the design engineers and pilots involved in the aircraft development. Before flight of the aircraft, detailed design studies and analyses on the simulator resulted in major improvements to the XV-15 configuration and control system. Piloted evaluations permitted the optimization of control-system gains, the early investigation of failure modes, and development of cockpit procedures. Proposed design changes were evaluated and either incorporated in the XV-15 design, modified, or discarded based on simulation results. The many hours of piloted operation of the simulator provided valuable training before flying this unconventional aircraft from one mode to the other. The intermediate, or tilt, modes were also investigated thoroughly. A major accomplishment of this extensive simulation activity was that there were no significant surprises to the pilots in flight, and that they were comfortable with the aircraft. The similarities of the simulation to actual flight, commented upon from the beginning, enhanced safety during the flight test program. In most cases, the limitations of the simulation made the aircraft easier to fly than the simulator.

As the test program progressed, the simulation model was updated to reflect flight-test data. Control-systems refinements were evaluated on the simulator before they were incorporated into the XV-15 design. These refinements, primarily to the rpm governor and SCAS, improved the responses and handling qualities of the aircraft. Flight-test anomalies, real or predicted, were investigated, and in many cases resolved through the use of the simulation model.

Flight Test Data Correlation for XV-15

The final test of both engineering and perceptual fidelity comes with comparison of simulation and flight test results. To date, the scope of the XV-15 flight test program has included envelope expansion and aeroelastic stability testing. This has provided significant amounts of performance and trim data. Handling qualities have been evaluated only qualitatively; however, some dynamics data have been obtained for evaluation of specific aircraft anomalies.

Performance--Level flight predicted and measured performance data are presented in Figure 1. The only change in the simulation program to generate the predicted data was to increase the aircraft flat plate drag from 7 to 9 ft.^{2}. This increment was based on the XV-15 wind tunnel tests performed in 1978. Note that the error was found in the wind tunnel before the flight evaluation of the aircraft in airplane mode, and is typical of the differences between the designer's drag goal, and the real "as built" aircraft drag.

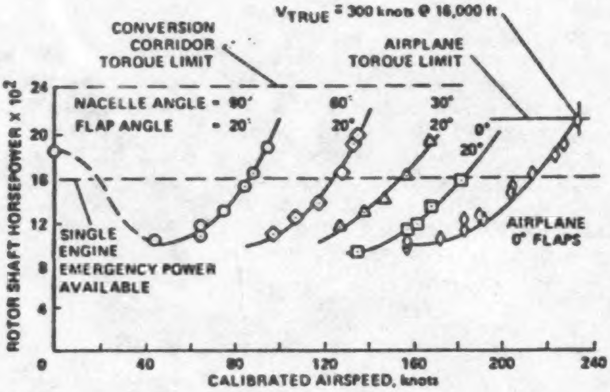


Figure 1. Comparison of Calculated and Measured XV-15 Performance

Static Trim--The static longitudinal trim curves are presented in Figure 2 as functions of airspeed and nacelle incidence angle, i_N. Correlation is generally good, with the deviation between prediction and test increasing as the aircraft is converted from the helicopter to airplane mode. This is attributable to errors in modeling of the wing downwash at the tail. The simulation model is based on small-scale wind tunnel data, and two minor discrepancies exist: One is caused by flap effects, the other by wind tunnel wall effects. The downwash discrepancy between prediction and flight data at 160 knots, with flaps retracted, is approximately one inch. These discrepancies caused no XV-15 programmatic impact and would not constitute a JVX program risk, and are also typical of discrepancies between wind tunnel and flight tests for any aircraft type.

Dynamics--The real essence of simulation fidelity is in obtaining good correlation on system dynamics; pilot responses, disturbance responses, and stability problems. Qualitative evaluations of short period dutch roll, and maneuver characteristics made to date have not indicated significant disparities between the aircraft and the simulation. Hover control responses in pitch, roll, and yaw with SCAS modifications were evaluated, and

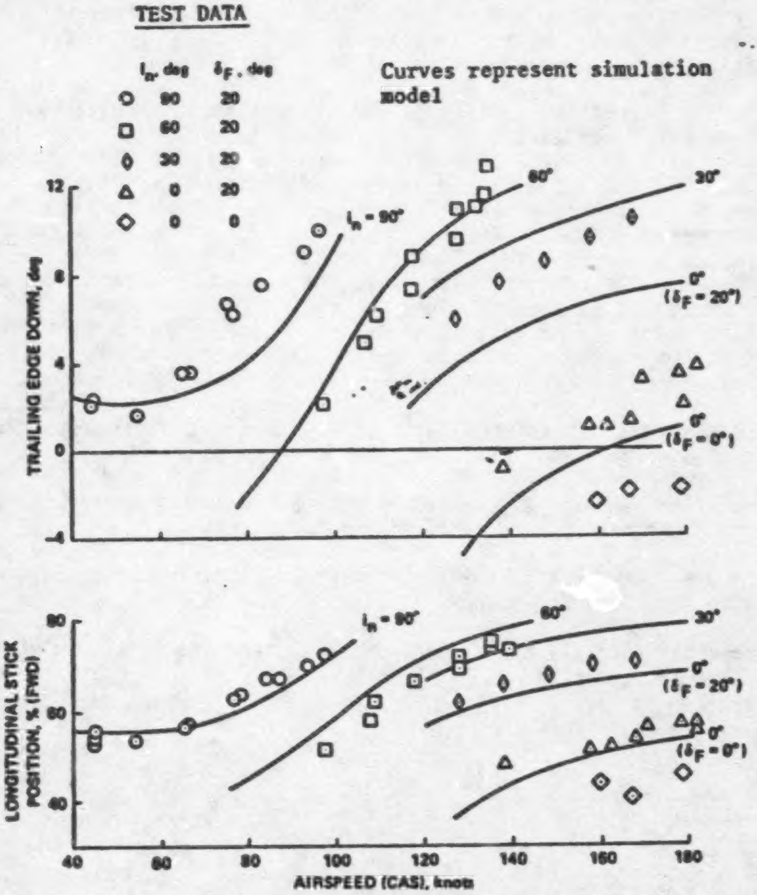


Figure 2. XV-15 Longitudinal control versus airspeed, comparison of simulation and test

control sensitivities in flight were very close to design values established on the simulator. The roll axis dynamic response data obtained for the fidelity checks also bear this out. There were, however, two additional simulation fidelity checkpoints flown where specific comparative data were obtained, and one instance of governor instability predicted on the simulator.

The instability problem, caused by the rpm governor, occurs at high sink rate (2,500 ft/min) and at about 70 knots airspeed. It is characterized by large amplitude rotor speed, pitch attitude, and sink rate oscillations. The recovery procedure developed on the simulator defined was simply to increase power. The instability was first encountered on the aircraft during the first high sink rate approaches in 1979. Governor time history data from this flight and from the simulation are presented in Figure 3.

The decay of the oscillation occurs in both cases after power application. This governor instability problem has since been fully resolved, using a simulation defined modification to the governor. It was not resolved when initially discovered on the simulation, because the contractor did not believe it was "real"; however, the Project Office thought it was real, and a safe, effective recovery mode was defined. (Flight safety was the only basis under the terms of the contract on which the Project Office would force design changes since cost control was high priority.)

The two additional flight checks for simulation fidelity data were flown, because the pilot believed that the simulator trim change with flaps and trim change with power in airplane mode were excessive. This was during a period when the simulation was operating simultaneously with XV-15 flight test operations at Ames Research Center, and the flight test plan included airplane mode operations. These data, presented in Figures 4 and 5, show good correlation between the aircraft and simulator. In these instances, the engineering fidelity is shown to be quite good; before flight checks, however, the pilot perceptual fidelity was regarded as poor. The reason for this is not fully understood; however, it does point out the value of flying specific maneuvers on both the simulator and aircraft for fidelity comparisons.

The following conclusions were derived from the XV-15 Tilt Rotor Research Aircraft simulation studies:

1. Simulation has been a powerful tool in procurement, design, development, and flight test of the XV-15 tilt rotor aircraft.

2. A requirement for simulation during proposal evaluations provides major benefits to the procuring agency.

3. Perceptual fidelity evaluations of simulation are invalid without engineering corroborations.

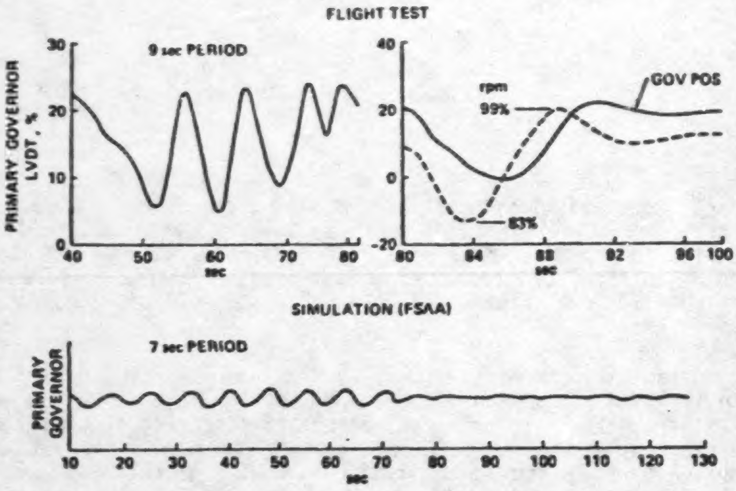


Fig. 3 Governor instability-time history comparisons.

4. Engineering fidelity evaluations require full equipment dynamic response evaluations, as well as evaluations of the mathematical model.

5. Use of simulation for developing specification or certification criteria is invalid without first evaluating the simulation fidelity.

6. Fidelity evaluation procedures and criteria are the most significant deficiencies in this "art."

7. As a result of simulation fidelity evaluations, a potentially critical aircraft roll pilot induced oscillation problem was identified.

All of this simulation effort--although it accomplished specific objectives in XV-15 design, evaluation, and pilot training--had another significant effect on the program: This was the confidence of the pilots and engineers in the design and handling qualities of the aircraft, and this same level of confidence can be provided to the JVX program if the available simulation tools are used properly.

Wind Tunnel and Static Test Program as a Risk Reduction Method

It should be stated at the outset that a program of wind tunnel and other forms of laboratory testing have been a part of the aircraft design process

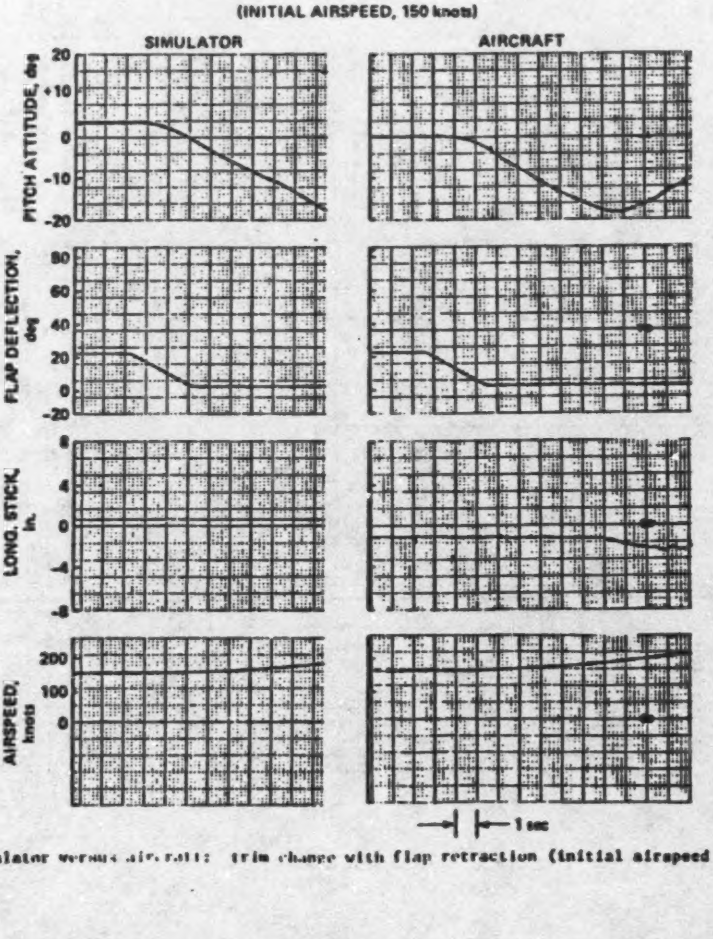


Fig. 4 Simulator versus aircraft: trim change with flap retraction (initial airspeed 150 knots).

for many years, because this is the best way of preventing technological and hence programmatic surprises. The advantage of model scale work is that design changes can be evaluated at a fraction of the cost of aircraft modification and is frequently a necessary precursor to flight evaluation even when an air vehicle is available. The question to be answered here is; what are the technological checks and balances that should be included in the JVX preliminary design phase to protect against subsequent difficulties with the air vehicle?

A fundamental technique in aerodynamics to allow comparison of the forces acting on geometrically similar shapes of different sizes is to express the forces in a nondimensional form called aerodynamic coefficients. These coefficients remain constant regardless of size or velocity except for two effects which are extremely important in wind tunnel modeling techniques. The first of these accounts for viscosity effects (Reynolds number), and the second accounts for the fact that air is a compressible fluid (Mach number).

Initially, the two-dimensional aerodynamics of the airfoil sections to be used in the rotor and wing design require experimental evaluation at a scale large enough to be above a "critical Reynolds number." This last criterion ensures data that is not highly dependent on scale. The tests should be done over a range of Mach numbers to ensure proper accounting for compressibility effects. These data are probably already in existence since airfoil technology development is generally a precursor to design; however, in the case of the wing sections, the type and size of the wing, flap and control surfaces need to be included to verify aerodynamic performance.

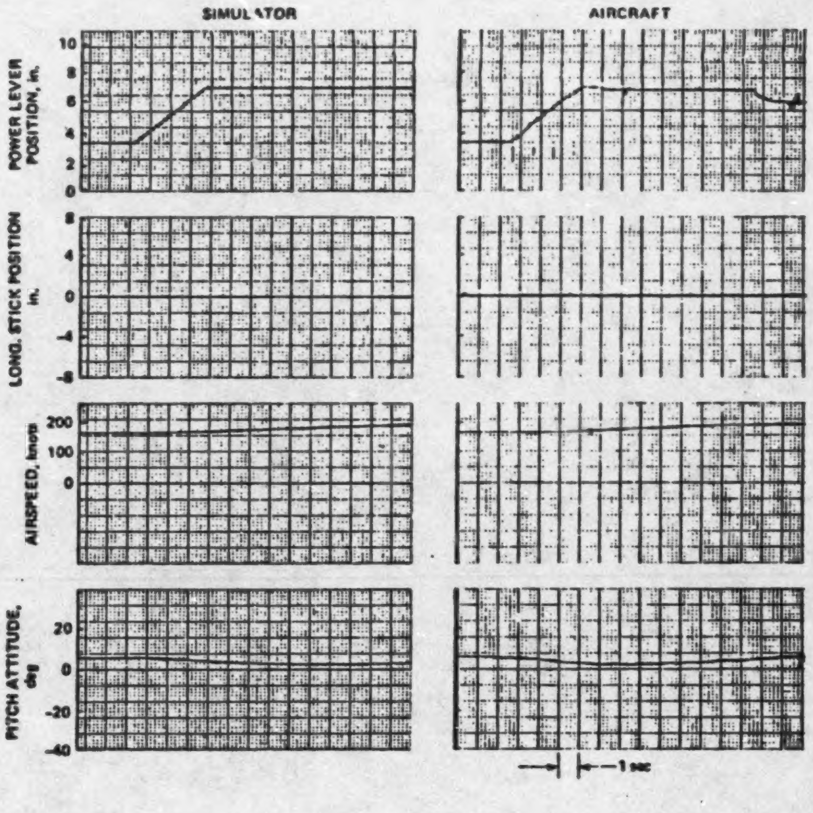


Fig. 5 Simulator versus aircraft: trim change with power pull (initial airspeed 163 knots).

The first aircraft model to be tested is a basic force model which is a full span model of the precise geometric shape of the air vehicle and uses the airfoil sections and flap configuration tested previously. No attempt is made here to include the rotor or the dynamics of the aircraft. The purpose of these tests (at least two) is to measure the basic aerodynamic forces on the aircraft shape. Flow visualization techniques using tufts or oil based suspensions will be used to show where unwanted flow separation may be occurring and provides a diagnostic tool for correcting any deficiencies found prior to retesting. These tests provide data on the air vehicle aerodynamics and stability derivative data and constitute a first check on the calculated design numbers and also on the data used in the simulation model. These basic model tests should also include test runs with aircraft nacelles on and off and with various flap and tail configurations to establish the contribution of each component to the forces measured.

The second series of aircraft model tests will be on a powered model where the rotor system is included although the dynamics of the vehicle are not necessarily modeled. This allows a relatively robust (Mach scaled) model that can be operated at relatively high Reynolds number and Mach number to provide aerodynamics and performance data. These tests provide a cross check on the prior model tests, and in addition, include a first evaluation of model scale rotor performance and the interaction of the rotor aerodynamics on the basic aircraft. Again sound engineering practice would require at least two tunnel entries, the second of which confirms changes made as a result of the first series of results and provides for tests that are defined as a result of uncertainties that can arise from prior data analysis. Again, the wind tunnel data provide a cross check on the simulation mathematics.

A third full-span model should incorporate the aerodynamics as defined from prior testing but should also reflect as precisely as possible geometric and dynamic similarity to the proposed aircraft. This model will be Froude scaled which means that the ratio of aerodynamic to inertial forces will be modeled as for the full-scale aircraft. In providing for dynamic similarity in this way, it is not possible to model in air, the correct Mach number or Reynolds number; however, provided the model is large enough to be above critical Reynolds number, these effects can be accounted for from prior experience and prior model testing during data analysis. These tests will provide a first evaluation of the aircraft structural dynamics and also provide a further set of supporting data for comparison of the aerodynamic data.

During the XV-15 program, semispan tests were performed and used successfully to verify full-scale aeroelastic behavior. A model rotor approximately 25 ft. in diameter should be mounted on a dynamically similar semispan wing and tested in the 40- by 80-Foot Wind Tunnel at Ames Research Center. This test by virtue of its size allows more precise detailed modeling of the dynamic system and will operate at relatively high Reynolds number and Mach number while still preserving dynamic similarity. The aeroelastic stability data obtained from these tests provide a second verification of the design and coupled with earlier model scale testing provides a basis for extrapolating to the full-scale air vehicle.

The large model rotor (25 ft. diameter) should also be tested for performance and can be done concurrently with other tests planned by NASA for the Boeing designed advanced XV-15 rotor and the existing Bell designed XV-15 rotor. All of these rotors have different aerodynamic design variables and should provide a good data base for establishing full-scale performance estimates for JVX.

In addition to the JVX program testing, NASA/Army has initiated a series of tests to provide a wider and more detailed data base for download estimation.

Two-dimensional tests of wing sections normal to the airflow using different flap configurations and leading edge devices are currently ongoing in the 7- by 10-Foot Wind Tunnel. Plans include a generic investigation using a three-dimensional model this summer, and we have just installed 110 pressure sensors on the XV-15 wing to measure that aircraft wing performance in flight.

If a program of testing as outlined including the retests and cross checks is included in the preliminary design phase, and the data obtained is cross fed into simulation model, the prediction of final aircraft performance, stability and handling qualities should yield good correlation with the flight test data.

Conclusion

As was stated in the Introduction, the problem of success in this instance is more of a management problem than a technical risk. The expertise and lessons learned in design, development, and subsequent flight test of the XV-15 must play a role in the design and evaluation of the JVX. During the design of the XV-15, the program manager had two effective tools unusual in most procurements. A resident deputy manager was on-site at the contractor's plant. In addition, a cadre of experienced and well qualified Government engineers who reported directly to the program manager had right of access to the contractor's plant at any time and worked with the contractor personnel in solving difficult design and development issues. These two factors provided the program manager with fast and accurate management data (albeit unofficial from the contractor's standpoint) and also an early warning and technical advice channel for the many technical issues which if left unchecked grow to be of major cost significance.

If the technical and management lessons learned through the XV-15 program are diligently applied, then it is our belief that the JVX program can proceed to full-scale development with confidence.

SUBCOMMITTEE RECESS

Senator STEVENS. The subcommittee is recessed.

[Whereupon, at 11:15 a.m., Tuesday, March 8, the subcommittee was recessed, to reconvene at the call of the Chair.]

LIST OF WITNESSES, COMMUNICATIONS, AND PREPARED STATEMENTS

	Page
Barrow, Gen. Robert H., Commandant, U.S. Marine Corps	352
Prepared statement	355
Davis, Maj. Gen. Harold W., Jr., Director of Army Budget, Office of the Comptroller of the Army, Department of the Army	85
Prepared statement	97
Gabriel, Gen. Charles, Chief of Staff, U.S. Air Force	251
Joint prepared statement	257
Lehman, Hon. John F., Jr., Secretary of the Navy	335
Biographical sketch	342
Prepared statement	339
Marsh, Hon. John O., Jr., Secretary of the Army	85
Prepared statement	89
Meyer, Gen. Edward C., Chief of Staff, U.S. Army	85
Biographical sketch	87
Prepared statement	94
Orr, Hon. Verne, Secretary of the Air Force	251
Joint prepared statement	257
Spangrud, Maj. Gen. Truman, Director of Budget, U.S. Air Force	251
Vessey, Gen. John W., Jr., Chairman, Joint Chiefs of Staff	1
Prepared statement	34
Watkins, Adm. James D., Chief of Naval Operations, U.S. Navy	344
Biographical sketch	350
Prepared statement	347
Weinberger, Hon. Caspar W., Secretary of Defense	1
Prepared statement	24

SUBJECT INDEX

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE AIR FORCE

Page
A-10 reprograming 275
ALCM-B missile 300
ALCM program 277, 314
Andrews, Hon. Mark, U.S. Senator from North Dakota, questions submitted by 328
AWACS 269
B-1B multiyear procurement 264, 298, 304, 311, 326
Ballistic missile program 269
Blue-green laser 322
Budget request 251
  Cuts in 261
C-17 aircraft 290
CENTAUR program 303
Comparative table 252
Cost overruns 279
D'Amato, Hon. Alfonse M., U.S. Senator from New York, questions submitted by 319
Defense savings, five-year plan in 267
Derivative tactical fighter 291
Electro magnetic pulse (EMP) 301
End strengths 289
F-100 engine, multiyear procurement of 276
FB-111 aircraft, role of 269
Flying hour readiness 254
Garn, Hon. Jake, U.S. Senator from Utah, questions submitted by 289
GLCM funding cuts 255
High tech weapons 318
Infrared missiles 265
Internal acquisition study 261
Jam-resistant radio communications 324
Kasten, Hon. Robert W., Jr., U.S. Senator from Wisconsin, questions submitted by 318
KC-135 reengining program 325
Land-based strategic command centers 278
LANTIRN program 282, 292
Maverick, funding of 272
McClure, Hon. James A., U.S. Senator from Idaho, questions submitted by 309
Military pay freeze 262, 308
Minuteman force 305
Minuteman III ICBM's 310
Multiyear procurement plans 263
MX missile systems 311, 316, 327
NATO forces, status of 254, 289
Next generation trainer (NGT) 323
Operation and maintenance, reductions in 255
PAVETACK 282
Procurement programs 283
Proxmire, Hon. William, U.S. Senator from Wisconsin, questions submitted by 325

Page
Radar systems 265
  Studies and analyses 267
Rapier missile systems 298
Readiness, maintaining of 260
Reprograming items 273
Research and development, funding for 274
Reserves, status of 253
SALT II terms, violation of 280, 309
SAR reports 262
Small intercontinental ballistic missile (SICM) 319
Soviet defense growth 264, 268
Soviet missile systems 313
Space-based laser program 302
Space weaponry, dangers of ban on 299
Spinney report 278
T-39 replacement program 293
TAC aircraft programs 306
Tactical fighter wings, expansion of 281
Titan III booster 297
Weicker, Hon. Lowell P., Jr., U.S. Senator from Connecticut, questions submitted by 287

DEPARTMENT OF THE ARMY

Adequate resources 237
Air defense 163, 202
Aircraft, preflight purchase of 190
Ammunition programs 222
Andrews, Hon, Mark, U.S. Senator from North Dakota, questions submitted by 237
Antiballistic missile system 235
Antitactical missile 214
Armored combat earth movers (ACE) 229
Army aircraft 204
Army military and civilian end strength 246
Automated meter calibration systems 219
Ballistic missile defense 239
BMD program 215
Basic training, expanded 229
Bradley fighting vehicle 165, 226
Budget adjustments 198
Budget authority comparative table 85
C-17 cargo plane 190
Camouflage screens and equipment 243
Camp Grafton, construction at 243
Chemical warfare 216, 234
Combat vehicle programs 225
Command structure, civilians in 196
Cost savings versus readiness 232
Costs, auditing of 241
Defense budget:
  Reduction in 168
  Army share of 162
DIVAD, cancellation of 239, 247
Division air defense gun 166, 238
Division 86 198
Equipment maintenance 230
Fiscal year 1982 reprograming request 174
Fort McCoy, Wisconsin 174
General Meyer, tribute to 162
Ground laser locator designator 245
Guard and Reserve, equipment for 240
High technology light division 207
Host nation support 191
JJX program 214
Light command post carriers 241
M1 tank program and production 192, 193, 206, 250
McClure, Hon. James A., U.S. Senator from Idaho, questions submitted by 231

Page
Military reform movement 235
MLRS multi-year procurement 227
Modernization, emphasis on 163, 231
Modernization systems support 221
Multiyear contracting 224
NATO troop strength 198
New starts 215
Nuclear projectile, 155 mm 215
Operational support costs 228
Patriot missile system 204, 245, 248
Pay:
  Freeze, effect of 184
  Increases 164
  Military 167
  Reenlistment bonus 185
Pershing, funding for 186
  Testing 185
Pershing II 188, 200
Personal defense weapons 240
Personnel, absentee rate of 183
POMCUS 205
Prepositioning 174
  Unit sets, materiel configured 191
Procurement, learning curve in 194
  R&D programs 169
  Reductions 165
Product improvement programs 212
Proxmire, Hon. William, U.S. Senator from Wisconsin, questions submitted by 248
RDT&E real growth 210, 211
Remotely piloted vehicles (RPV) 214, 241
Reserve forces, equipping of 233
Selected acquisition report 196
SEMA-X JVX 219
Soviet attack helicopter threat 227
Special operations forces 208
Stennis, Hon. John C., U.S. Senator from Mississippi, questions submitted by 245
Stinger system 194, 226, 245
Stock fund 209
Strategic mobility 170, 226
Tactical ballistic threat 215
Tank engines, warranties on 238
TOW and TOW 2/Stinger 194, 195
Training ammunition 220
Value engineering program 213
Weapons costs 195
Women:
  Army, status in 175
  Combat, role in 193
  Too-far-forward status 182
XM 252 mortar 220

DEPARTMENT OF THE NAVY

A-6 aircraft 451, 454
Adversary aircraft 462
AEGIS system 375, 407
Aircraft:
  Carrier goal 337
  Modernization 459
  Procurement 337, 346, 393, 422, 459
  Readiness 337
ALWT 465
Andrews, Hon. Mark, U.S. Senator from North Dakota, questions submitted by 431
Antisubmarine warfare 464, 467

Page
AO-177 413
ASW capabilities 379, 421
AV-8B Harrier 396, 436, 456, 463
Battleship reactivations 384, 388
Blue-green laser 442
Budget request 335, 423, 429
Commercial aircraft leasing 385, 391
Comparative table 336
Contractor claims 434
CVN cost savings 384
    Funding 389
D-5 missile 475
D'Amato, Hon. Alphonse M., U.S. Senator from New York, questions submitted by 441
DDG-51 387, 406, 416, 455
Department operations improvement program 461
End strength increase 403
F-14 aircraft 451
F/A-18 program 374, 391, 394, 431, 440, 452, 474
Fighter engine procurement 382
Force levels 345, 349, 404
Garn, Hon. Jake, U.S. Senator from Utah, questions submitted by 417
HARM program 372
Johnston, Hon. J. Bennett, U.S. Senator from Louisiana, questions submitted by 477
JVX program 380, 477
Kasten, Hon. Robert W., Jr., U.S. Senator from Wisconsin, questions submitted by 438
LAMPS MK III 465
Land-based tactical air 395
LSD-41 multiyear procurement 390
McClure, Hon. James A., U.S. Senator from Idaho, questions submitted by 424
Marine Corps:
    Budget request 353
    Enhancement programs 356
    Financial resource management 370
    International incidents, response to 352
    Maritime prepositioning program 353
    Manpower 364, 403
    Procurement budget 395
    Quality of 354
    Readiness 353
    Readiness, training, operational performance 368
    Real growth 429
    Reserve equipment 435
    Reserve forces 367
Maritime superiority 430
Material readiness area 345
Medical readiness 404
Merchant ship naval augmentation program (MSNAP) 414
MK 48 ADCAP torpedo 405
Modernization 345, 348
NASA report 479
Naval Reserve equipment 434
Navy readiness 344, 347
New Jersey reactivation 467
Pay raise 402
Personnel 385, 401
Polaris submarine deactiviation 426
Procurement improvements 432
Proxmire, Hon. William, U.S. Senator from Wisconsin, questions submitted by 473
Rapid deployment force 460
SALT II 420, 426
SECDEF guidance 437
Ship construction funds 410
Ship retirements 381

Page

- Shipbuilding program ... 459
- 600-ship Navy, justification for ... 425, 438
- SLCM ... 419
- Space system survivability ... 443
- Spinney report ... 427
- Stennis, Hon. John C., U.S. Senator from Mississippi, questions submitted by ... 455
- Strategic C^3 network ... 417
- Surface action group (SAG) homeporting ... 450
- Sustainability ... 345, 348
- T-5 tankers ... 392
- TAO 187 ... 388, 409, 411, 471
- TAV-8B Harrier ... 463
- TOMAHAWK program ... 398, 400, 405, 424
- TRIDENT program ... 376, 397, 405, 418, 424, 441
- UNFO/TSU program ... 392
- VTXTS ... 392, 443

SECRETARY OF DEFENSE

- AEGIS combat testing ... 51
- ALCM program, reduction in ... 53
- Andrews, Hon. Mark, U.S. Senator from North Dakota, questions submitted by ... 74
- B-1 bomber, need for ... 52
- Ballistic missile program ... 33
- Bradley vehicle ... 43
- Budget request ... 1
  - Adequacy of ... 65
  - Inflation estimates of ... 46
  - Long-term program for ... 22, 50
  - Outlay rates ... 73
  - Overview of ... 81
  - Priorities ... 64
  - Shares of ... 21
- C-17 cargo aircraft ... 40
- Carter budget, defense outlays since ... 19, 30
- Comparative budget table ... 6
- Compulsory military service, possible return to ... 41
- Computer languages, DOD use of ... 78
- Defense strategy ... 26, 32
- Europe, troop levels in ... 56
- F-110 engine, European reaction to ... 80
- Fiscal year 1983 supplemental ... 66
- 5-year shipbuilding plan ... 55
- Foreign military sales (FMS) guaranteed loan program ... 77
- Foreign military threat, strategy for meeting ... 11
- Guard and Reserve forces, attention to ... 55, 76
- Industrial modernization incentives program ... 79
- Japan, contributions of, to defense effort ... 54, 59, 70
- Joint Chiefs of Staff, reform proposals by ... 74
- Lebanon, situation in ... 75
- M1 tank ... 8
- McClure, Hon. James A., U.S. Senator from Idaho, questions submitted by ... 81
- Military buildup, congressional support for ... 10
- Military installations, neglected maintenance in ... 52
- Military retirement program ... 37, 39
- Modernization programs ... 29
- MX missile ... 53
- National security objectives ... 24
- NATO:
  - Costs, allied burdensharing in ... 51, 54, 70
  - U.S. troop increases in ... 58
- Nonpay accounts, inflation in ... 50
- Nuclear carrier construction ... 50
- Pay increase ... 38, 46
- Pershing missile system ... 68

Page
Procurement process:
  Changes in ... 7
  Competitive practices ... 42, 47
  Consensus of ... 7
  Long-term costs ... 51
  Multiyear area ... 44
  Noncompetitive areas ... 49
  Single system ... 48
Program cancellations ... 72
Readiness and personnel ... 28, 32, 36
Retention practices ... 45
Rudman, Hon. Warren, U.S. Senator from New Hampshire, statement of ... 2
Strategic mobility ... 35
Strategic modernization programs ... 34, 67, 82
Stevens, Hon. Ted, U.S. Senator from Alaska, opening statement of ... 1
TAK-X ships ... 62
Theater nuclear weapons ... 35
Trident II missile ... 53
U.S./Soviet military comparisons:
  Investment by mission area ... 13
  Investment trends ... 12
  Selected weapons, production of ... 14
  Production-Request comparisons ... 15
U.S.S.R.:
  Global power projection ... 17
  Military threat from ... 24, 34
  MX-quality missiles, deployment of ... 36
  Weapon distribution ... 18
Vessels and aircraft, lease of ... 61, 62, 71
Viper antitank weapon ... 3, 8, 9

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